

electron user

Vol. 7 No. 10 July 1990 £1.25



TYPE IT IN!

**Beginner's
guide to
the galaxy**

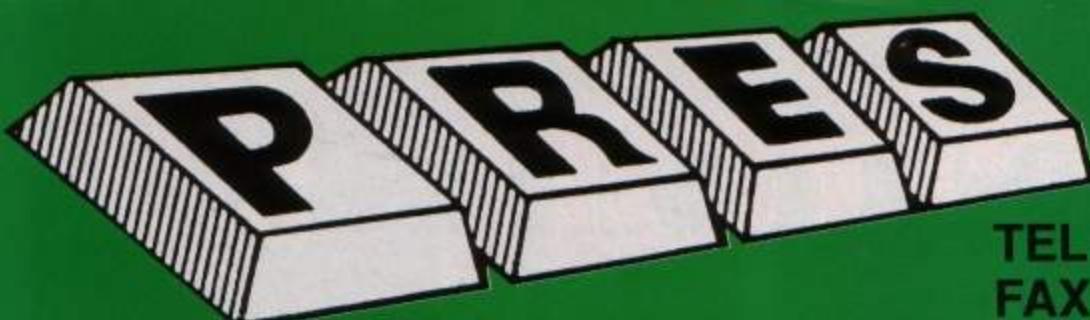
Printer controller!

Gunboat battle!

Cheats galore!

Action chess!

Introducing...
LET'S COMPUTE!
CENTRE PAGES



TEL: 0276 72046

FAX: 0276 51427

Now available through PRES Advanced Computer Products range of software products

THE ADVANCED PLUS**3 MK II**

The Advanced Plus 3 Mk 2 (AP3) (requires Plus 1 to operate) now you can turn your Electron into a full disc system - no more waiting for tape loading or 'bad block' / 'data?' messages. The AP3 is the only fully compatible disc upgrade running Acorn's own filing system - the ADFS. (As supplied in Acorn Plus 3, Master 128, Master Compact, Archimedes and A3000 range). AP3 Mk 2 gives you:

- 1) A fully Acorn compatible 1770 interface in cartridge form with spare 16k ROM socket. Can be fitted with DFS modification kit to give BBC compatibility.
- 2) 80 track-double sided - 3.5" disc drive. Storage capacity 640k.
- 3) Acorn ADFS (Advanced Disc Filing System).
- 4) Welcome disc with extra 3 bonus games of Snapper, Draughts, Reversi.
- 5) Utilities.
- 6) Full documentation.

Special package price available for those who do not already own a Plus 1. A second drive, either 3.5" or 5.25" can be added by fitting our AP3 second drive lead and configuring the second drive as Drive 1. The AP3 drive can also be used on a BBC or Master computer. We continue to add new titles to the list of Electron software on 3.5" ADFS. (See software section and Games Compendium which includes many of the Superior titles not previously available).

COMPLETE PACKAGE ONLY**£129 excl VAT; £148.35 inc VAT****ADFS VERSION 1.1**

Suitable for existing Plus 3 or A.P.4 users.
£14.95 ex VAT; £17.19 inc VAT

ADFS E00

For Electron users with either Plus 3 or A.P.4 and 32k of S/W RAM i.e. ABR.

3.5" ADFS (manual avail. sep).

£14.95 ex VAT; £17.19 inc VAT

5.25" ADFS (manual avail. sep.) £14.00 ex

VAT; £16..10 inc VAT

5.25" DFS (2 discs+ADFS manual) £19.00

ex VAT; £21.85 inc VAT

AP4 MOD

This converts an AP3 to an AP34 (ie. DFSEOO) supplied as a two chip set, full documentation and fitting instructions.

£21.74 ex VAT. £25.00 inc. VAT

ADVANCED BATTERY-BACKED RAM

A standard Acorn approved cartridge but containing 32k (2 x 16k) of sideways RAM. The added bonus is the battery-backed feature that holds the RAM contents when the power is switched off! Different ROM images can be loaded into either bank from ROM images previously saved. The banks can also be locked to imitate ROM use. Now it is possible to have View & ViewSheet in one cartridge every time you switch on. Other uses include ABR, ROM images, printer buffer, ROM software development. The use of ABR is simplified by the newly written PRES software utilities which include: SaveROM, LoadROM, Lock, Unlock, Printer Buffer, Zero and MakeROM a new utility to put your own software from disc or tape into ABR & use the ROM filing system. All software is supplied in ABR with a simple menu to transfer the utilities to your own media. No hardware switching - totally software controlled. Instructions for using supplied software and necessary information for users developing their own applications.

"It's a superb add-on and a must for all serious Electron users" . . . Electron User £39.00 excl VAT; £44.85 incl VAT

ADVANCED PLUS 6 . . . a fully buffered 6 ROM expansion module for the Electron user. AP6 is fitted inside the Advanced Plus 1 or a modified Acorn Plus 1 (when used with the Acorn Plus 3, 5 ROM sockets are available). All sockets are designed to accept either ROM/EPROMS or RAM chips. A further feature is the optional AP7 upgrade.

"A marvellous piece of design . . . don't hesitate, buy it!" - EU, May '88
£33.00 excl VAT; £37.95 inc VAT

UPGRADE SERVICE for the original Acorn Plus 1 to Advanced Plus 1 and AP6
£40.00 excl VAT; £46.00 inc VAT

ADVANCED PLUS 7

An internal battery-backed RAM upgrade for the Advanced Plus 6. TWO 16K pages of Sideways RAM, battery-backed and featuring full write protect facility. Just like ABR but fitted internally & vacating a cartridge slot. This product is compatible with all Acorn BBC/Master & Electron computers.

£39.50 excl VAT; £45.42 inc VAT

SPECIAL OFFERS

	Ex VAT	Inc VAT
AP1 + ABR	£78.22	£89.95
AP1 + Single Joystick	£60.83	£69.95
Panasonic Printer		
KX-P1081 + Cable + Securicor delivery	£139.09	£159.95
Library Box of 10 x 3.5" discs	£13.00	£14.95

Delta 3B Single Joystick	£13.00	£14.95
Delta 3B Twin Joystick	£19.09	£21.95

ADVANCED DISC TOOLKIT

(01) /M/B/E/C £30 ex VAT £34.50 inc VAT

Any Acorn user including Master, BBC B+, Electron, DFS, 1770 DFS, ADFS, 2nd & co-processors A.C.P.'s BEST SELLING product containing over 30 commands inc.: - powerful memory & disc editor, search memory/disk/basic, catalogue/unplug ROMS, load/run programs below page, automatic menu, file transfer (inc. locked cassette files), ADFS utils etc, etc ("it's superb" . . . Database Pubs. - 'A top-class toolkit - I have no hesitation in recommending it . . . Acorn User Nov. 86) (16K EPROM & FULL MANUAL)

ADVANCED DISC INVESTIGATOR

(06) /M/B/E/C £25 ex VAT £28.75 inc VAT

ADVANCED ELECTRON DFS

(05) /E/E £21.00 ex VAT £24.15 inc VAT

ADVANCED ELECTRON DFS EBB

(14) /E+ABR £17.38 ex VAT £19.95 inc VAT

ADVANCED 1770 DFS

3 versions ADM/G(11) - ADB(12) ADE (13) £30.00 ex VAT £34.50 inc VAT

ADVANCED CONTROL PANEL

(20) /M/B/E/C £30 ex VAT £34.50 inc VAT

ADVANCED FILE MANAGER

£25 ex VAT £28.75 inc VAT

ADVANCED ROM ADAPTER 2

An Acorn approved cartridge containing a card with special 'zero' profile sockets.

£13.00 excl VAT; £14.95 inc VAT

ADVANCED PLUS 2 ROM

We feel this is one of the best, low cost, additions we have produced for the Electron & +1 user, especially for plus 3, AP3 & ABR users.

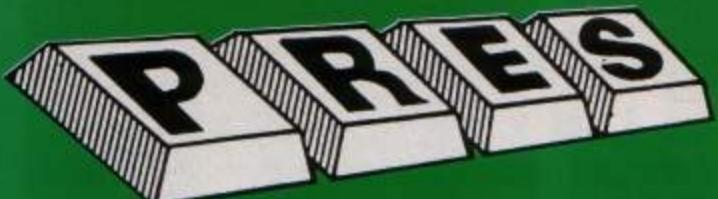
Now with this easy to fit upgrade you can add:

1. Fix for Tape filing system in Hi-res screen modes.
2. *ROMS - to display all ROMs/ROM images present on the system.
3. *UNPLUG - disable ROM/RAM image.
4. *INSERT - enables or inserts a previously unplugged ROM.
5. *KILL - to totally disable the Plus 1.
6. *LOCK - to lock a sideways RAM bank in ABR, AQR, AP7.
7. *LROMS - to lock all sideways RAM banks found.
8. *UNLOCK - to unlock a sideways RAM bank in ABR, AQR, AP7.
9. *UROMS - to unlock all sideways RAM banks found.
10. *SAVEROM - saves a copy of a ROM image to the current filing system.
11. *LOADRUN - loads a ROM image from the current FS into a RAM bank.
12. *FORMAT - will format an ADFS disc for Plus 3 or AP3.
13. *VERIFY - reads and tests every sector on an ADFS disc.
14. *VFORM - formats and verifies an ADFS disc in one command.
15. *BUILD - creates a text file that can be used by *EXEC (ie IBOOT).
16. *LIST - displays a numbered listing of a text file.
17. *TYPE - displays a file on screen with no line numbers.
18. *DUMP - to view a file's contents on screen.
19. *LANG - selects a default language to be booted on <CTRL-BREAK>.
20. *HELP - provides a full 'help' list on all the ROM's commands.

Now there is no need to search for your utilities disc every time you want to format/Verify a disc, Build a IBoot file or Lock/unlock/Load a ROM image into ABR PLUS much more . . . the ideal companion from the company that produces the Acorn Plus 1.

£11.00 ex VAT; £12.65 inc VAT

"The AP2 is the definitive Plus 1 Rom . . . I'm not sure what I'd do without it . . . Like all of PRES'S other products it's been well worth waiting for." EU July '88



PRES POLICY

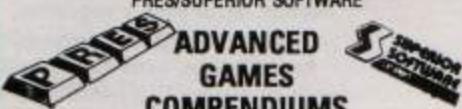
1. To provide the best possible service & assistance to users.
2. Supply Acorn based or Acorn compatible products & to enable upward compatibility wherever possible.
3. Provide tested products with special attention to quality of design, components & production.
4. **Only to cash cheques & credit card receipts when we know we can supply the goods ordered.**

ADVANCED GAMES COMPENDIUMS-ON DISC

Vol. I		
Invaders	Stock Car	Croaker
Jet Power Jack	Bandits @ 3	Felix in the
Killer Gorilla	Bumble Bee	Factory
Vol. II		
Felix and the Fruit	Rubble Trouble	Moonraider
Monsters	Swag	Frenzy
The Mine	Cybertron Mission	Escape Moonbase Alpha
Vol. III		
Danger UXB	Adventure	Chess
Ghouls	Repton	Galactic
Felix and the Evil Weevils	Swoop	Command
3.5" £9.99 ex VAT each volume; £11.49 inc VAT 5.25" £8.99 ex VAT each volume; £10.34 inc VAT		

NEW TITLES AVAILABLE

PRES/SUPERIOR SOFTWARE



3.5" ADFS - OTHER TITLES/FORMATS TO BE AVAILABLE

Vol. IV

Arcadians	Monsters
Meteors	Qwak
Snooker	Video's Revenge
Magic Mushrooms	Bugblaster

Vol. V

Starship Command	Cosmic Camouflage
Maze	Guardian
Killer Gorilla 2	Stranded
Frak	Constellation

Vol. VI

Planetoid	World Geography
Zalaga	Alien Dropout
Fruit Machine	Centibug
Invaders	Percy Penguin

3.5" £9.99 ex VAT each volume; £11.49 inc VAT

Ring for details on other new titles still to come!!

DISCS

3.5" 10 in plastic library box - ideal for Plus 3 users	£14.99
5.25" 10 dbl/sided dbl/dens.	£12.99
5.25" 10 sing/sided sing/dens.	£8.99
5.25" Twin Gift Pack	£1.49

DISC DRIVES

	Ex VAT	+VAT
Cumana 5.25" dbl/sided 40/80 track, switchable, inc. psu.	£113.00	£129.95
Cumana 5.25" single/sided 40 track, inc. psu.	£86.87	£99.00
PRES Special 3.5" double sided 80 track, inc. psu.	£78.00	£89.70

VIEW CARTRIDGE

the Acornsoft word processor for the Electron and Plus 1. inc. full documentation. £14.95

VIEWSHEET CARTRIDGE

the Acornsoft spreadsheet for the Electron and Plus 1. inc. full documentation. £14.95

VIEW & VIEWSHEET

both products as above *special price*. £19.95

DATABASE PUBLICATIONS

Now exclusively on 3.5" Disc

Electron User Jan 88-Jan 90 monthly discs each @	£4.75
Fun School under 5's	£5.95
Fun School 5-8's	£5.95
Fun School 8-12's	£5.95
Magic Sword	£6.95
10 Best Educational Vol. I	£6.95
10 Best Educational Vol. II	£6.95
Classic Arcade Games	£6.95
Arcade Games Creator	£5.95
Nursery Rhymes	£6.95
10 of Best Vol. 1	£6.95
10 of Best Vol. 2	£6.95
10 of Best Vol. 3	£6.95
10 of Best Vol. 4	£6.95
Classic Card & Board Games Vol. I	£7.95
Classic Card & Board Games Vol. II	£7.95
E.U. Monthly Disc containing Printer Driver	£4.75
5.25" Discs	
Arcade Game Creator	£5.95
Knitwear Designer	£9.95

SPECIAL PACKAGE PRICES

	Ex VAT	Inc VAT
AP1 + AP3	£165.00	£189.75
AP1 + AP6	£77.00	£88.55
ABR + 3.5"		
ADFS E00	£48.65	£55.95
ABR + 5.25"		
ADFS E00	£46.95	£53.99
ABR + 5.25"		
DFS (ADFS E00)	£51.00	£58.65
AP5 + Music 5000	£152.17	£175.00
AP7 + 3.5"		
ADFS E00	£49.52	£56.95
AP7 + 5.25"		
ADFS E00	£48.65	£55.95
AP7 + 5.25" DFS		
(ADFS E00)	£52.13	£59.95
AP4 + CS400	£147.78	£169.95
AP1 + AP4 + CS400	£189.00	£217.35

ACCESSORIES

ELECTRON POWER SWITCH £3.96 ex VAT; £4.55 inc VAT

AP3 2nd DRIVE LEAD £5.96 ex VAT; £6.85 inc VAT

PLUS 3 2nd DRIVE ADAPTOR £6.91 ex VAT; £7.95 inc VAT

Panasonic KX-P1081 Printer Ribbon £5.50 ex VAT; £6.32 inc VAT

A.D.F.S Guide Manual £5.00

ADVENTURE GAMES ON DISC 3.25" ADFS £6.95 ex VAT per Disc; £7.99 inc VAT per Disc

PRINTER

Panasonic Matrix with NLQ £146.96 ex VAT £169.00 inc VAT

Panasonic KX-P1081 with NLQ matrix printer includes printer ribbon and securicor delivery. £139.09 ex VAT; £159.95 inc VAT

ELECTRON ADVANCED USER GUIDE

further reading and information for the Electron user. £3.95

ADVANCED BASIC EDITOR+

"It is probably the most powerful software to be released for the Acorn Electron for a long time. I can fully recommend this most useful package". EU Sept. '89

Cartridge: £32 ex VAT; £36.80 inc VAT

Module: £24.95 ex VAT; £28.69 inc VAT

"NEW" PACKAGE PRICE

MUSIC 5000 and New 1MHz Bus Cartridge £99.00 (ex VAT); £113.85 (inc VAT)

NEW 1MHz Bus Cartridge NEW

£19.99 ex VAT; £22.99 inc VAT

DISC INTERFACES

(Plus One required)

AP3 INTERFACE: As supplied with AP3 package.

Price £52.00 ex VAT £59.80 inc VAT

AP4 INTERFACE: A fully Acorn compatible disc interface.

Price £80.83 ex VAT £89.95 inc VAT

AP34 INTERFACE: Get the best of both filing systems.

Price £69.55 ex VAT £79.98 inc VAT

AP3 & AP34 Please state disc size 3.5" or 5.25"

Please send order to: P.R.E.S. LTD., PO. Box 319, LightWater, Surrey, GU18 5PW. Tel: 0276 72046 (24 hr). Fax: 0276 51427

(Mail order only)
All our prices include
UK delivery & VAT
Subject to availability

Name
Address
Postcode
Tel:
Credit Card No:

Product	Qty	@	Total
I enclose payment for £			
Exp date			(Ref E07)

(in event of any query-
please include your tel. no.)



NEW! TEN of the BEST! EDUCATIONAL GAMES



Packed full of some of the best educational games from the pages of *Electron User*, the new *Ten of the Best Educational Games* is the ideal way for your children to learn about maths, spelling, anagrams, telling the time, general knowledge, and even the rudiments of running a business!

Specially compiled by the *Electron User* team to give a good grounding in all aspects of learning, and at the very special price of only £5.95 on tape, or £6.95 on 3.5in disc, this collection is a treat you and your children cannot afford to miss!

Give your children hours of fun, and help them to learn the easy way by ordering your copy today.

THE PROGRAMS

Company Count – Work your way up through the company starting off as a messenger, and ending up as president!

Hungry Harry – Find out what it's like to be an assistant in a busy shop. Can you work out the correct change to give the customers?

Lemonade Stall – Try your hand at running a lemonade stall at a popular seaside resort.

Dozer Disorder – Fill in the

missing letters after they are bulldozed into a pit.

Crocodile – Unscramble the letters of a word before the crocodile gets you.

Snail Trail – See how good you are at general knowledge in this trivia quiz.

Hiss – Improve your spelling by guiding a snake round the garden eating up words in the right letter order.

Maths Fun – Test your powers of mental arithmetic.

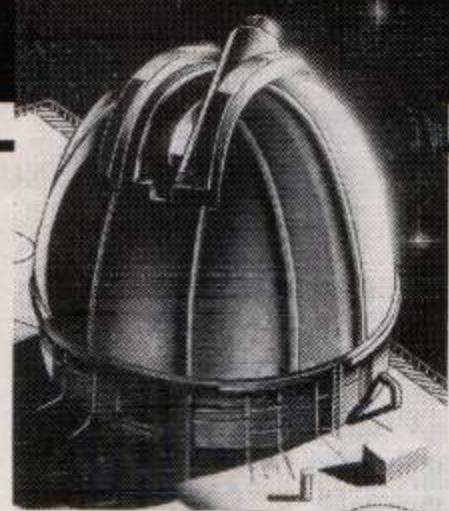
Odd One Out – Pick the object that doesn't fit from the list of five.

Yule Spell – Guess the hidden word or you'll lose your Christmas presents!

ONLY £5.95

Order your copy
today, using the
form on Page 45

CONTENTS



Cover Story

14 Galaxy Guide

Now you can squeeze more into your micro's memory with this useful Basic program-shrinking routine

6 News

All the latest developments in the world of the Electron. Plus the Gallup chart.

7 Gallup

Find out the positions of your favourite games in this up-to-date chart.

8 Cheats

We conclude the exclusive Electron User series that helps you hit previously unobtainable scores. This month

- ✓ Killa Gorilla2
- ✓ Last Ninja
- ✓ Orbital
- ✓ Pipeline
- ✓ Repton Infinity
- ✓ Zenon

11 Proc Compiler

Now you can keep a library of routines and bring them together easily with this useful utility.

18 Pendragon

Our resident adventure wizard bids farewell with more hints, tips and clues for popular adventures.

21 Chesster

An action-packed arcade game where chess pieces move in strange ways but there's really no other connection with the board game.

27 Easy Print

An extremely useful routine that lets you make the most of your printer by accessing its many features the easy way.

33 Software

At last, an arcade game that's completely different to any previously seen on the Electron. We give it the once over.



34 Time Warp

A look back at the very first issue of Electron User and a report on the exciting developments that rocked the world of the Electron at that time.

36 Gunboat

Into combat with this computer version of the classic two player game of Battleship.

41 Micro Messages

A selection of the many informative and interesting letters you have been sending us over the past few weeks.

Published by
Database
Publications Ltd

Europa House,
Adlington Park, Adlington,
Macclesfield SK10 4NP.

Editorial, Admin, Advertising:
Tel: 0625 878888
Fax: 0625 879966
Telex: 94081191
MicroLink: MAG001
Prestel: 614568383

Subscriptions:
051-357 2961

Managing Editor
Derek Meakin

Features Editor
Peter Davidson

Production Editor
Peter Glover

Reviews coordinator
Pam Turnbull

Advertising Sales
John Snowden
Peter Babbage

News trade distribution:
Diamond Europress Sales & Distribution, Unit 1, Burgess Road, Ivyhouse Lane, Hastings, East Sussex TN35 4NR. Tel: 0424 430422.

Printed by Carlisle Web Offset

Electron User is an independent publication. Acom Computer Ltd. are not responsible for any of the articles in this issue or for any of the opinions expressed.

Electron User welcomes program listings and articles for publication. Material should be typed or computer-printed, and preferably double-spaced. Program listings should be accompanied by cassette, tape or disc. Please enclose a stamped, self-addressed envelope, otherwise the return of material cannot be guaranteed. Contributions accepted for publication will be on an all-rights basis.

ISSN 0952-3057

© 1990 Database Publications Ltd. No material may be reproduced in whole or in part without written permission. While every care is taken, the publishers cannot be held legally responsible for any errors in articles or listings.

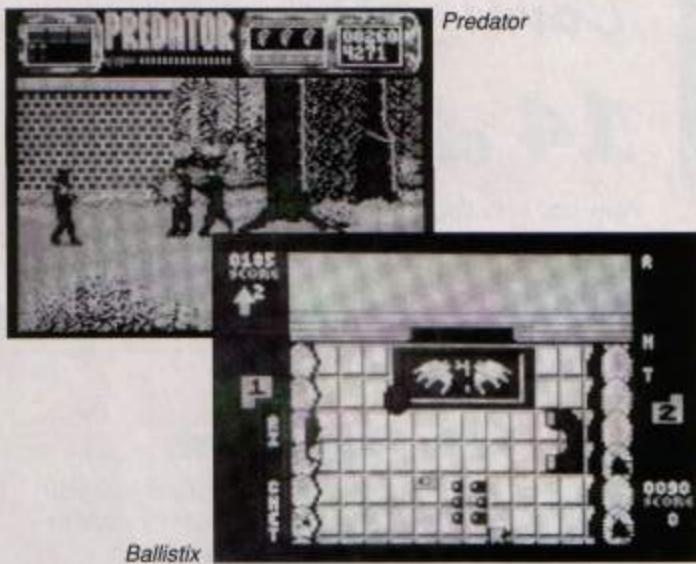
Database Publications is a division of Europress Ltd.

Sam's on the ball

BILLED as the fastest, wackiest, toughest computer ball game yet, Ballistix will be the star offering on Play It Again Sam 14 from Superior Software (0652 58585).

A number one smash hit on the Atari ST and Amiga, Ballistix features 60 different action screens. Likely to be teamed with it will be Predator, the computer game of the Schwarzenegger film which challenges players to take a crack commando unit into the South African jungle to rescue a bunch of trapped diplomats.

Other titles for Sam 14 are still to be finalised, but Superior boss Steve Hanson is considering a new game, Star Port, from the author of Quest, Tony Oakden. It's a space version of Tony's previous arcade adventure Camelot. Also a likely contender is Network from Peter Scott. It's a similar but bigger



version of Peter's previous game Pandemonium, which was a hit on Sam 13.

Looking ahead, Superior will be going into the trivia quiz market. Christmas release will be The Quiz Challenge game which is a

Predator

typical trivia offering set to a snooker theme with coloured balls related to different questions. It comes from author Walter Mansell who also produced Smash & Grab and A Question of Sport.

Electrons tackle IT with ease

NEW information technology courses which are hitting the country's classrooms are sending many education authorities scurrying for the nearest Archimedes or PC dealer in the belief that they must go up market to achieve the stipulated results.

Few believe that they can reach the necessary criteria with anything as lowly as the Electron but down in Cornwall, staff at Falmouth School are of a different opinion.

For the last 12 years, the computer department of this 1200 pupil secondary school has revolved around 15 Electrons. They will continue to be used for the Information Technology courses which have now superceded the former Computer Studies classes.

"When we bought equipment for the computer department years ago, we went for a good hands-on machine rather than high quality", said IT co-ordinator Trevor Greenslade. "It was a good decision. The Electrons have been reliable and robust and even after seven years they are still going strong. They do a jolly good job."

"I have been involved in computer studies for as long as I can remember. I have often thought of upgrading to other machines but somehow we never seemed to have the money."

"Many of the schools down here have networks and that could be something for the future. Until then, we will continue with the Electrons. Trevor is confident that the Elks are quite capable of supporting the demands of the new IT syllabus. Even if he is successful in acquiring a network, there will still be plenty of work for them to do. They will be moved down into the lower school to give first and second year pupils their first introduction to secondary school computing."

E-Type draws the crowds

PLANS by Impact Software (0742 769950) to bring top Archimedes car racing game E-Type to the Electron have met with overwhelming support from the public.

Mark Botterill of Impact reports more than 500 advanced orders for the BBC/Electron version of which half are from Electron owners.

"This is the first car racing game for the Electron apart from the straight track Overdrive which was brought out five years ago," said Mark. "It has resulted in the largest number of advanced orders we have ever had for any game".

E-Type was originally due out on May 1 but had to be put back about five weeks because programmer Gordon Key was held up by his work on Apocalypse.

It's goodbye – and hello!

Regrettably this, the 82nd issue of *Electron User*, is the last. It marks the end of an era in computer magazine publishing.

When the first issue appeared, in October 1983, Acorn had just launched its mini-marvel of a micro. Excitement mounted as demand soared in the months that followed. Then, two years later, the bubble burst and Acorn stopped production.

But that was far from being the end of the Electron – or of *Electron User*. Warehouses were piled high with the machines, and they continued to be sold in large numbers.

And such was the loyalty of you, our readers, that *Electron User*, under the dedicated editorship of Roland Waddilove, has continued publishing for five long years after Acorn had finished supporting the machine. A remarkable record.

But now we feel it is time to move on. We know there is still lots to be discovered about the Electron, and many more games and utilities still to be written for it.

From now on you'll be able to find them in two completely different magazines. First, our big brother, *The Micro User*, will be featuring much more about the Electron in its pages, and it will be providing a monthly feast of entertainment and information for the serious Electron user.

But the really exciting news for users of all Acorn machines is the launch of a completely new dimension in computer magazine publishing – *Let's Compute!*

For a quick preview of what you can expect turn to the Centre Pages. But this can only give a brief indication of the fun times you are going to have, month after month, with *Let's Compute!* – and your Electron. We'll be seeing you!

DEREK MEAKIN

GALLUP

SOFTWARE CHART

THIS MONTH	LAST MONTH	TITLE (Software House)	COMMENTS	PRICE
1	•	PRO-BOXING Code Masters	It's straight to the number one spot for budget king CodeMasters' cut price version of <i>By Fair Means or Foul</i> .	2.99
2	•	SUMMER OLYMPIAD <i>Kixx</i>	Summer is here, and this is your chance to be athletic without even going outside. Definitely value for money here.	2.99
3	2	PAPERBOY <i>Encore</i>	Still hanging around near the top of the charts. It's a pity about the flicker and slow speed. Get a turbo to improve matters.	2.99
4	5	YIE AR KUNG FU <i>Hit Squad</i>	There have been many clones and any combat game is invariably compared to it. A nice trip into meaningless violence if that's your thing.	2.99
5	9	BOXER <i>Acornsoft</i>	Feel that you want to hit something? This is your third chance so far in this month's chart. Take your feelings out on the keyboard and a little sprite.	2.99
6	10	STRIKE FORCE HARRIER <i>Alternative</i>	Now a budget title, you can take off with this excellent Mirrorsoft flight simulator. Good feel to the controls and realistic movement.	2.99
7	11	REPTON 2 <i>Blue Ribbon</i>	The little green friend has been revitalised in one of his earlier roles. Shame on you if you are missing this one from your collection.	2.99
8	12	COLOSSUS 4 CHESS <i>CDS</i>	The oldest strategy game in the world. Good training for a human versus human contest. So see if you can pit your wits against the computer and win.	9.95
9	13	TARZAN <i>Alternative</i>	If leaping from tree to tree appeals to you, and the voice of the wild beckons you may be a little disappointed with this one.	2.99
10	8	SPELLBINDER <i>Superior</i>	Another original from the Superior stable. Arcade adventure but with a little more to offer than some of its contemporaries.	9.95
11	14	CREEPY CAVE <i>Atlantis</i>	Budget time with a chilly underground arcade adventure. Why the ghost wants your house key is beyond me. But you'd better get him quickly.	1.99
12	15	JOE BLADE 2 <i>Players</i>	The graphics are good and the game very playable. The puzzle screens will keep you and community conscious Joe busy for hours.	1.99
13	16	PLAY IT AGAIN SAM 5 <i>Superior</i>	Another compilation of four games, this time covering the brilliant Imogen, colourful Elixir and new ones Bugblaster and Fortress.	9.95
14	17	RICOCHET <i>Superior</i>	Recognisable format, very addictive and a must if you are looking for something as challenging as Citadel and Palace of Magic.	2.99
15	•	ELIXIR <i>Superior</i>	Also on Sam 5, you are the unfortunate chemist transformed to the size of one of his own test tubes. Can you escape the laboratory alive?	9.95
16	•	CODENAME: DROID <i>Blue Ribbon</i>	Good old Stryker is off again, this time on his own and at a budget price. Easily one of the best arcade adventures around.	2.99
17	•	PALACE OF MAGIC <i>Superior</i>	There's a feel of Citadel about this arcade adventure full of puzzles and deadly encounters. Definitely one not to miss.	2.99
18	•	LAST OF THE FREE <i>Audiogenic</i>	Still hanging around the fringes of the charts. You will have to search out the shops that sell this old – but still not knocked out – timer.	7.95
19	•	JOE BLADE <i>Players</i>	The original Joe story, and though you don't need to buy both, you'll be missing out if you don't. Electron programming at its best.	1.99
20	5	GYROSCOPE <i>Melbourne House</i>	If you suffer from dizzy spells don't go for this one. Again an oldie making a comeback, buy it if you get the chance – it comes of a good vintage.	8.95

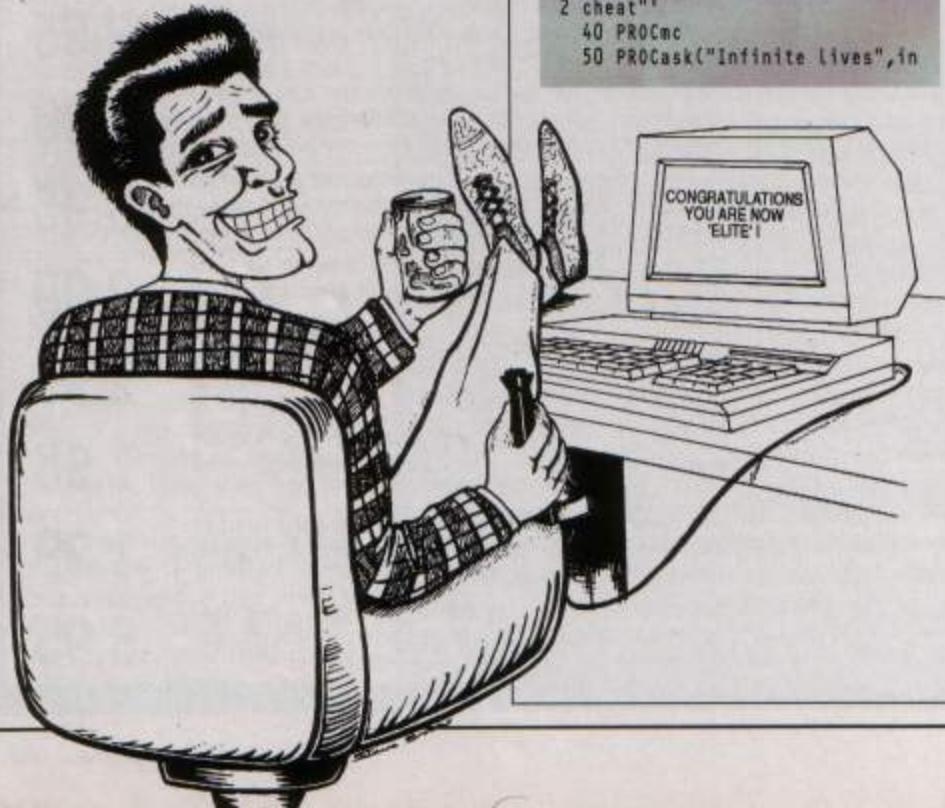
Cheat it again, Joe

Here's the final installment of the three part series in which Mark Gidley - author of the *Cheat it Again* series - has been helping you get to those high scores that were previously way out of reach

OUR bulging mailbag has confirmed that the 12 cheats published over the last two months have been very popular. Now, we're sure you'll be just as pleased with the last six cheats lifted from *Cheat it Again, Joe* volume 4.

This month there's cheats for the Last Ninja, Orbital, Pipeline, Repton Infinity, Zenon and the Play It Again Sam version of *Killer Gorilla* 2.

Just type in the listings and save them to your own blank disc or tape - not the one carrying the original software. Then run them and follow the on-screen instructions for more enjoyment from your favourite games.



Killer Gorilla Cheat

```
10 REM Killer Gorilla 2 cheat
20 REM Electron (Sam) version
30 MODE4:PRINT"Killer Gorilla
2 cheat"
40 PROCmc
50 PROCask("Infinite Lives",in
```

Volume 5

Killer Gorilla 2 cheat

```
Infinite Lives (Y/N) : Yes
Immortal (Y/N) : No
OK - Insert Killer Gorilla 2 tape and
press play ...
```

```
lives)
60 PROCask("Immortal",inm)
70 PRINT"OK - Insert Killer G
orilla 2 tape and      press pl
ay ..."
80 VDU28,0,13,20,10
90 END
100 */KILLER2
110 END
120 DEFPROCask(A$,A$)
130 PRINT;A$;STRINGS(26-LENAS,
");"(Y/N) : ;:A$=GETS:IF A$="Y"
THEN PRINT;"Yes" ELSE PRINT;"No"
:TA$=&60
140 ENDPROC
150 DEFPROCmc
160 FORIX=0 TO 2 STEP2
170 PX=&900
180 COPTIX
190 .init
200 LDA#0:STA&2E00
210 LDA#inter MOD 256:STA&220:L
DA#inter DIV 256:STA&221:LDA#14:L
DX#4:JSR&FFF4
220 RTS
230 J:PX=&7F00:COPTIX
240 .inter
250 PHP:PHA:TXA:PHA:TYA:PHA
260 LDA&2E00:CMPSA9:BNEout
270 JSRinlives:JSRimm
280 LDA#13:LDX#4:JSR&FFF4
290 .out PLA:TAY:PLA:TAX:PLA:PL
P:RTS
300 .inlives LDA##A5:STA&6CF:RT
S
310 .imm LDA##EA:STA&960:STA&96
1:STA&964:STA&965:STA&2006:STA&20
07:STA&200B:STA&200A:STA&2D8C:STA
&2D8D:STA&A11:STA&A12:STA&A15:STA
&A16:STA&2CF5:STA&2CFD:RTS
320 J:NEXT
330 ENDPROC
```

The Last Ninja Cheat

The Last Ninja cheat

Number of Lives (001-255) : 50
 Starting level (001-006) : 4
 Infinite lives (Y/N) : Yes
 No power loss in combat (Y/N) : Yes
 Walk over rivers (Y/N) : No

OK - Insert The Last Ninja tape and press play ...

```

10 REM The Last Ninja cheat
20 REM Electron version
30 :
40 MODE4:PRINT!"The Last Ninja
cheat"
50 lives=FNnum("Number of live
s",1,255,"001","255")
60 level=FNnum("Starting level
",1,6,"001","006")
70 PROCmc
80 PROCask("Infinite Lives",in
lives)
90 PROCask("No power loss in c
ombat",inpower)
100 IF ?inpower<>860 THEN ?less
power=860:GOTO120
110 PROCask("Less power loss in
combat",lesspower)
120 PROCask("Walk over rivers",
walk)
130 PRINT!"OK - Insert The Last
Ninja tape and press pl
ay ..."
140 VDU7,21:*FX18

```

```

150 *K.1 PAGE=&E00|MLOAD"LAST-N
JA1|[F|M200!&C0=RND:CALL&D00|MRUN
|F|M
160 *FX138,0,129
170 END
180 DEFPROCask(AS,AX)
190 PRINT;AS;STRINGS(26-LENAS,
");"(Y/N) : ":";AS=GETS:IF AS="Y"
THEN PRINT;"Yes" ELSE PRINT;"No"
:AX=&60
200 ENDPROC
210 DEFFNnum(AS,LX,M%,LS,MS)
220 PRINT;AS;STRINGS(22-LENAS,
");"(+"+LS+"-"+MS+) : ";
230 INPUT""a%:IF a%<LX OR a%>M%
THEN GOTO220 ELSE =a%
240 DEFPROCmc
250 FORIX=0 TO 2 STEP2
260 PZ=&D00
270 COPTIX
280 LDA#I MOD 256:STA&220:LDA#I
DIV 256:STA&221
290 LDA#14:LDX#4:JSR&FFF4
300 LDY#Load DIV 256:LDX#Load M

```

```

0D 256
310 JSR&FFF7
320 LDA#13:LDX#4:JSR&FFF4
330 LDA#lives:STA&239F
340 LDA#level+&30:STA&2260:STA&
227A
350 LDA#level-1:STA&22DD
360 JSRinlives:JSRinpower
370 JSRlesspower:JSRwalk
380 JMP&22DC
390 .inlives LDA#&A9:STA&24BD:R
TS
400 .inpower LDA#0:STA&246F:RTS
410 .lesspower LDA#1:STA&246F:R
TS
420 .walk LDA#0:STA&18FF:RTS
430 .i LDA&3CA:AND#254:STA&3CA:
RTS
440 .load
450 J:$P%="LOAD NINJA-3"+CHR$13
:NEXT
460 ENDPROC

```

Orbital cheat

Infinite lives (Y/N) : Yes
 Immortal to Octopodes (Y/N) : No
 Infinite time (Y/N) : Yes

OK - Insert Orbital tape and press
play ...

```

10 REM Orbital cheat
20 REM Electron version
30 :
40 MODE4:PRINT!"Orbital cheat"
50 PROCmc
60 PROCask("Infinite lives",in
lives):PROCask("Immortal to Octop
odes",imm):PROCask("Infinite time
",time)
70 PRINT!"OK - Insert Orbital
tape and press play ...
"
80 CALL&1800:PAGE=&E00:CHAIN"O
RBITAL"
90 END
100 DEFPROCask(AS,AX)

```

Orbital

Cheat

```

190 LDA#inter MOD 256:STA&204
200 LDA#inter DIV 256:STA&205
210 CLI:RTS
220 J:P%=&4E50:COPTIX
230 .inter PHP:PHA:TXA:PHA:TYA:
PHA
240 LDA&2700:CMP#8AD:BNEnout
250 JSRinlives:JSRinm:JSRtime
260 LDAbyte:STA&204:LDAbyte+1:S
TA&205
270 .out PLA:TAY:PLA:TAX:PLA:PL
P:JMP(byte)
280 .byte NOP:NOP
290 .inlives LDA#&A9:STA&12AD:R
TS
300 .imm LDA#0:STA&1B98:RTS
310 .time LDA#0:STA&1781:STA&17
93:RTS
320 J:NEXT
330 ENDPROC

```

Pipeline

Cheat

Pipeline cheat

Number of Lives (001-255) : 99
 Infinite lives (Y/N) : Yes
 Immortal (Y/N) : No

OK - Insert Pipeline tape and press play ...

```

10 REM Pipeline cheat
20 REM Electron version
30 :
40 MODE4:PRINT'"Pipeline cheat
"
50 lives=FNnum("Number of live
s",1,255,"001","255")
60 PROCmc
70 PROCask("Infinite Lives",in
lives):PROCask("Immortal",immorta
l)
80 PRINT"OK - Insert Pipeline
tape and press play ...
"
90 *K.1 PAGE=&E00|MLOAD"PIPELI
NE|[F|M470CALL&900|MRUN|M
100 VDU7,21:*FX138,0,129
110 END
120 DEFPROCask(AS,A%)
130 PRINT;AS;STRINGS(26-LENAS,""
");"(Y/N) : ";:AS=GET$:IF AS="Y"
THEN PRINT;"Yes" ELSE PRINT;"No"
:TAZ=&60
140 ENDPROC
150 DEFFNnum(AS,LX,MX,L$,M$)
160 PRINT;AS;STRINGS(22-LENAS,""

```

```

");"(L$;"-";M$;" : "
170 INPUT" a%:IF a%<LX OR a%>MX
THEN GOT0160 ELSE =a%
180 DEFPROCmc
190 FORI%=&T02 STEP2
200 PX=&900
210 OPTIX
220 LDA#in MOD 256:STA&220:LDA#
in DIV 256:STA&221:LDA#14:LDX#4:J
SR&FFF4
230 LDY#game DIV 256:LDX#game M
00 256:JSR&FFF7
240 LDA#13:LDX#4:JSR&FFF4
250 LDA#lives:STA&236C
260 JSRinlives:JSRimmortal:JMP&
11F4
270 .inlives LDA#&A5:STA&2441:R
TS
280 .immortal LDA#&A5:STA&293C:
RTS
290 .in LDA&3CA:AND#254:STA&3CA
:RTS
300 .game
310 J:$P%="LOAD GAME"+CHR$13:NE
XT
320 ENDPROC

```

Repton

Repton Infinity cheat

Infinite lives (Y/N) : Yes
 Passwords not needed (Y/N) : Yes

OK - Insert Repton Infinity tape and press play ...

```

10 REM Repton Infinity cheat
20 REM Electron version
30 MODE4:PRINT'"Repton Infinit
y cheat"
40 PROCmc
50 PROCask("Infinite Lives",in
lives)
60 PROCask("Passwords not need
ed",nopass)
70 PRINT"OK - Insert Repton I
nfinity tape and press pl
ay ..."
80 CALL&900:PAGE=&E00:CHAIN"
90 END
100 DEFPROCask(AS,A%)
110 PRINT;AS;STRINGS(26-LENAS,""

```

```

");"(Y/N) : ";:AS=GET$:IF AS="Y"
THEN PRINT;"Yes" ELSE PRINT;"No"
:TAZ=&60
120 ENDPROC
130 DEFPROCmc
140 FORI%=&T02 STEP2:PX=&900:E0
PTIX
150 LDA&204:STAbyte:LDA&205:STA
byte+1
160 LDA#0:STA&3300
170 LDA#inter MOD 256:STA&204
180 LDA#inter DIV 256:STA&205
190 RTS
200 .inter
210 PHP:PHA:TXA:PHA:TYA:PHA
220 LDA&3300:CM#&4F:BNEout
230 JSRinlives:JSRnopass
240 LDAbyte:STA&204:LDAbyte+1:S
TA&205
250 .out
260 PLA:TAY:PLA:TAX:PLA:PLP:JMP

```

```

(byte)
270 .byte NOP:NOP
280 .nopass LDA#&EA:STA&21E6:ST
A&21E7:RTS
290 .inlives LDA#&A9:STA&FDA:LD
A&B2:STA&F0B:RTS
300 J:NEXT
310 ENDPROC

```

*** REPTON INFINITY SCREEN ***:

Repton Infinity cheat

Infinite lives (Y/N) : Yes
 Passwords not needed (Y/N) : Yes

OK - Insert Repton Infinity tape and press play ...

Wayne G Boyd shows how to build up a program from a library of procedures

WHY re-invent the wheel each time you write a program? You should be able to build up a library of routines – input, double height, menus and so on – and use them in every new program you write.

Once the library is constructed this routine, Compile, will help disc users put the procedures together. Tape users can use the method described in the panel.

When your procedures have been put together in this way you can write the core of the program to call them. Remember that if one procedure calls another you must always include both in your programs.

Compile displays the routines on your disc – currently the ones in the \$ directory – and lets you select the ones you want putting together. If you want to keep your procedures in a different directory just change line 150 to, say:

```
150 *DIR P
```

The program will ignore all filenames with a ! before them, so !BOOT and any other ! program will not be included in the menu. If you type the program in and save it as !MAIN it will remain hidden as your procedures are displayed.

When you save your procedures to disc you do so as a normal Basic program in the root directory. You don't need to adjust any data statements or to add the name of the new procedure to any menu list in this program because it automatically reads the disc's catalogue information.

When you use Compile, select the procedures required from the menu by entering the appropriate numbers. You can continue to enter numbers until you press H followed by Return.

Then Compile will put the selected procedures together in to one long program and ask you for the line number you want your new Basic program to start from. After this has been entered the new routine will appear on the screen ready for further work by the programmer.

Using tape?

As cataloguing a tape takes a long time, a program like Compile is not suitable for that medium. But you can still build up a library of procedures and build a program if you use this method:

- Save each procedure on a separate tape – or at least remember the index counter on your recorder – so that the appropriate one can be found quickly.
- Load the first routine as if it was a full program using:

```
LOAD "filename"
```

- Add other routines to the end of this

Building Blocks

Procedure Compilation Program

Designed and Written By Wayne G Boyd

1. SCREEN
2. FILL
3. COLOUR
4. RAM
5. DISC
6. MODE9
7. CLS
8. INPUT
9. BACK G
10. LI BOX
11. SQ BACK
12. H LIGHT
13. DBL

Setting up

It is extremely important that the !boot file – or other start up file – be set up in the following manner:

```
S%PAGE  
PAGE=64900  
CHAIN"!MAIN"
```

It must be set up like this because the program needs to know the page of the micro so the procedures can be put there and the program itself must be run way above this.

Enter a proc number, or 'H' when happy

=>

```
10 REM ****  
20 REM **  
30 REM ** PROCEDURE COMPILER **  
40 REM **  
50 REM ** By **  
60 REM ** Wayne G Boyd **  
70 REM ** (c)Electron User **  
80 REM **  
90 REM ****  
100 MODE6  
110 *DIR $  
120 PROCFIND  
130 PROCDISPLAY  
140 PROCAK  
150 PROCONSTRUCT  
160 PROCRETURN  
170 END  
180 :  
190 DEFFPROCFIND  
200 DIM procs(27)  
210 osgbpb=&FFD1  
220 h$=""  
230 DIM parblk 80C  
240 VDU23,255,255,255,255,255,255,  
255,255,255
```

using:

```
OSCLI"LOAD filename "+STR$"(TOP-2)
```

- Renumber your program using the command:

```
RENUMBER startline, step
```

Your routines will now be ready for you to add the main core of the program to.

This method will also work from disc, but is not as convenient to use as selecting filenames from a menu. However, the OSCLI command above is useful, combining two Basic programs whether you're using tape or disc.

```

250 DIM name$(100)
260 DIM filename 10
270 DF=1
280 AX=8
290 X%=parblk MOD $100
300 Y%=parblk DIV $100
310 parblk!9=0
320 REPEAT
330 parblk!1=filename
340 parblk!5=1
350 CALL osgbp
360 IF parblk!5>1 THEN PROCprint
370 UNTIL parblk!5=1
380 ENDPROC
390 DEF PROCprint
400 FOR I=1 TO ?filename
410 LET h$=h$+CHR$(filename?i)
420 NEXT
430 IF INSTR(h$,"!")=0 THEN name$(DF)=h$ ELSE h$="";GOTO 470
440 h$=""
450 DF=DF+1
460 g%=DF-1
470 ENDPROC
480 DEFPROCdisplay
490 VDU19,1,3,0,0,0
500 PRINTTAB(5,2)"Procedure Compilat
ion Program"
510 PRINTTAB(5,3)"-----"
520 PRINTTAB(2,5)"Designed and Writt
en By Wayne G Boyd"
530 IF g%<13 THEN amount=g% ELSE amo
unt=13
540 FOR loop1=1 TO amount
550 IF loop1<10 THEN PRINTTAB(1,(7+
Loop1));loop1;".";"name$(loop1) ELSE P
RINTTAB(0,(7+loop1));loop1;".";"name$(
loop1)
560 NEXT loop1
570 IF g%>13 AND g%>26 THEN amount=1
580 IF g%>13 AND g%<=26 THEN amount=
g%-13
590 IF g%<=13 THEN GOTO 630
600 FOR loop2=1 TO amount
610 PRINTTAB(18,(7+loop2));loop2+13;
".;"name$(loop2+13)
620 NEXT loop2
630 PRINTTAB(0,22)"Enter a proc numb
er, or 'H' when happy"
640 PRINTTAB(0,23)"=> "
650 ENDPROC
660 DEFPROCask
670 FOR loop=1 TO 26
680 PRINTTAB(3,23)SPC(30)
690 INPUTTAB(3,23)proc$:PROCcheck(VA
L(proc$))
700 IF (VAL(proc$)<=26 AND VAL(proc$)
>0 AND used=FALSE AND (VAL(proc$))<=g
%)OR proc$="H" THEN SOUND1,-15,165,5 E
LSE VDU7;GOTO 680
710 IF loop=g% OR loop=26 THEN numbe
r%=loop
720 IF proc$="H" OR proc$="h" THEN n
umberX=loop-1:loop=26:GOTO 740 ELSE pr
oc$(loop)=VAL(proc$)
730 PROChighlight(VAL(proc$))
740 NEXT loop
750 ENDPROC
760 DEFPROChighlight(number)
770 IF number<=13 THEN ypos=7+number
: xpos=0
780 IF number>13 THEN ypos=7+number-
13:xpos=18
790 PRINTTAB(xpos,ypos)CHR$(255);CH
R$(255);
800 ENDPROC
810 DEFPROCcheck(num)
820 used=FALSE
830 FOR check=1 TO 26
840 IF num=procs(check) THEN used=TR
UE
850 NEXT check
860 ENDPROC
870 DEFPROCconstruct
880 VDU23,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
890 page=$Z
900 FOR loop=1 TO numberX
910 OSCLI("LOAD "+name$(procs(loop))
+" "+STR$"page")
920 AX=OPENIN(name$(procs(loop)))
930 Len=EXT#AX
940 CLOSE#AX
950 page=page+(len-2)
960 NEXT loop
970 ENDPROC
980 DEFPROCreturn
990 PRINTTAB(0,22)"Please enter line
number to start from ";
1000 PRINTTAB(0,23)"=> ";SPC(30)
1010 INPUTTAB(3,23)linenum
1020 OSCLI("K.O PAGE=" +STR$(S$) + "|MEN
D|MREN." +STR$(linenum) + "|MVDU6|MMD.7|M
LIST|M")
1030 VDU21
1040 *FX138,0,128
1050 END
1060 ENDPROC

```

QUAL-SOFT

THOUGHTWARE

Sports simulations

"A real challenge to the thinking football fan... Bobby Robson could do worse than have a crack at this in his preparation for the World Cup".

AMSTRAD ACTION
REVIEW

QUAL-SOFT COMMENT: At last an INTELLIGENT management game for the knowledgeable soccer enthusiast!

TAPE 1
QUALIFIERS

ROME 90*

TAPE 2
FINALS

A WORLD CUP MANAGEMENT SIMULATION

Summer 1988 and English International football is at its lowest ebb. We have failed miserably for the European Nations Cup, and had a string of very poor International results. In a few months we will set out on the '90 World Cup qualifying trail. You have been given the most important job of restoring English pride in their football. You have a match in Athens, Denmark at Wembley, and a South American tour, to assemble a team, first to qualify, and then to beat the world's best in Rome.

TAPE 1 (Qualifiers)

- ★ Current squad of 16 players + 20 user defined players.
- ★ Friendlies in Athens, at Wembley + South American tour.
- ★ ANY team formation you choose, 2 from 5 substitutes.
- ★ In match tactics any no. of individual player adjustments.
- ★ Your qualification group, full results and table.

TAPE 2 (Finals)

- ★ Choose a 20 man squad to take to the finals.
- ★ Group of 4 prelims, 16 to final knockout comp.
- ★ Extra Time, PENALTY SHOOT-OUTS, where relevant.
- ★ Formation and strength information on opposition.
- ★ 2 from 9 substitutes (the FA tells us so).

ENGLAND'S GAMES: FULL PITCH, 22 MAN, 3D GRAPHICS & SOUND EFFECTS

QUAL-SOFT comments: With 5 levels of play, 12 depths of sophistication, and "fun" graphics, this game can be enjoyed by an 8 year old youngster as a "fun" game, and by the most sophisticated as a tactical/strategy challenge of the highest order.

PACKAGE: Tape 1 plus Tape 2 plus 20 Page Manual £9.95 (57K RAM usage. Some would call this a MEGAGAME. YES IT WILL RUN ON YOUR 32k BBC.

QUALSOFT GUARANTEE: Sent by 1ST CLASS POST on day of the order with P.O., Cheque, Access payment is received. Telephone Access orders accepted.

* ROME '90 is an update of the classic MEXICO '86

QUAL-SOFT
Dept. EU
18 Hazelmere Rd.,
Stevenage, Herts SG2 8RX.

Tel: 0438
721936

Please supply:
ROME '90
Electron
BBC'B'

Name:
Address:
Access No. (if applicable)

RETURN THE COUPON FOR FREE COLOUR BROCHURES!

NEW! - AMIGA PACK



Commodore A500
Flight Of Fantasy

£399

INC
VAT

A500 BATMAN PACK



The Commodore A500 Batman Pack must surely rank as one of the most popular computer packs ever! The pack features the Commodore Amiga 500 computer with mouse controller and TV modulator, plus four top software titles. The software includes: 'Batman The Movie' - Rid Gotham City of the cunning joker; in Ocean's top selling title based on the blockbuster Batman film; 'New Zealand Story' - high quality conversion of the leading arcade game; 'Interceptor' - Dogfight with two F-16's in this leading flight simulator; 'Deluxe Paint II' - top quality Amiga graphics package which set the standard for others to follow. Return the coupon for further details.

PACK INCLUDES:

Amiga 500 Computer & Mouse £399.99
A520 TV Modulator £24.99
Batman The Movie £24.95
New Zealand Story £24.95
Interceptor £24.95
Deluxe Paint II £49.95

TOTAL RRP: £549.78
Less Pack Saving: £150.78

PACK PRICE: £399.00

£399 INC
VAT

AMIGA 2000



For the more serious or professional applications user, Commodore have a selection of systems based around the expandable Amiga 2000, at prices from £1295+VAT. The A2000 features a full 1Mb RAM (expandable to 9Mb), 9 system expansion slots, plus IBM compatibility with the use of PC-XT or PC-AT bridgeboards. Complete and return the coupon, putting a tick in the A2000 box, for details of A2000 computer systems.

£1295

+VAT = £1489.25

FLIGHT OF FANTASY

Flight of Fantasy is the very latest Amiga 500 pack from Commodore, featuring BRAND NEW software releases, to make this the most spectacular A500 pack ever! The pack features the Amiga 500 computer with mouse controller and TV modulator, as well as four top software titles. These include the following:

DELUXE PAINT II:

The high quality graphics program that set the standard for other Amiga art packages. Deluxe Paint II includes powerful, easy to use tools that bring out the artist in you. Create masterpieces, presentations, 3D perspectives or just doodle.

ESCAPE / ROBOT MONSTERS:

Here's something completely different - a science fiction story with comic book style graphics. Our heroes Jake and Duke are on the Planet X Rescuing Humans who have been captured by the Robot Monsters and forced to create an evil Robot Army to DESTROY EARTH! Jake and Duke fight their way through hordes of evil Robots to help the Humans escape.

RAINBOW ISLANDS:

Step on your magic shoes, practise throwing a rainbow and you're ready to go island hopping. From the Island of Do to Monks Island, you will encounter Do to Monks Island, swinging insects, lethal combat machines, mechanical assassins, the formidable beings of legend and folklore. Finally enter the world of darkness and its inhabitants.

F29 RETALIATOR:

The ultimate in flight simulation with a choice of two aircraft and four battle environments with dozens of different tactical missions. Aerial combat, strategic bombings, interactive ground based battles, seaplane carriers - the list of features is endless. Real time cockpit displays, including 'true radar' enhance the realistic feel of this stunning simulation.

PACK INCLUDES:

Amiga 500 Computer & Mouse £399.99
A520 TV Modulator £24.99
Deluxe Paint II £49.95
Escape/Robot Monsters £19.99
Rainbow Islands £24.95
F29 Retaliator £24.95

TOTAL RRP: £544.82

Less Pack Saving: £145.82

PACK PRICE: £399.00

£399 INC
VAT

FOR FURTHER DETAILS OF THE AMIGA RANGE, COMPLETE THE COUPON AND RETURN IT TO SILICA SHOP THE UK's No1 AMIGA SPECIALISTS

SILICA SHOP OFFER YOU

FREE OVERNIGHT COURIER DELIVERY: On all hardware orders shipped in the UK. **TECHNICAL SUPPORT HELPLINE:** Team of Amiga technical experts at your service. **PRICE MATCH:** We normally match competitors on a 'Same product - Same price' basis. **ESTABLISHED 12 YEARS:** Proven track record in professional computer sales. **£13M TURNOVER (with 60 staff):** Solid and reliable with maintained growth.

BUSINESS/EDUCATION/GOVERNMENT: Volume discounts available for large orders.

SHOWROOMS: Demonstration and training facilities at our London & Sidcup branches.

THE FULL STOCK RANGE: All of your Amiga requirements from one supplier.

FREE CATALOGUES: Will be mailed to you with offers and software/peripheral details.

PAYMENT: By cash, cheque and all major credit cards.

CREDIT PAYMENT TERMS: Silica are licensed credit brokers - return coupon for details.

Before you decide when to buy your new Amiga computer, we suggest you think very carefully about WHERE you buy it. Consider what it will be like a few months after buying your Amiga, when you may require additional peripherals or software, or help and advice with your new purchase. And, will the company you buy from contact you with details of new products? At Silica Shop, we ensure that you will have nothing to worry about. Silica have been established for over 12 years, and have an annual turnover of £13 million. With our unrivaled experience and expertise, we can now claim to meet our customers requirements with an understanding which is second to none. But don't just take our word for it. Complete and return the coupon now for our latest free literature and begin to experience the "Silica Shop Service".

RETURN THE COUPON NOW FOR
FREE BROCHURES

**SILICA
SHOP**

MAIL ORDER: 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX Tel: 081-309 1111
Order Lines Open: Mon-Fri 9:00am-6:00pm
No Late Night Opening
Fax No: 081-309 0609

LONDON SHOP: 52 Tottenham Court Road, London, W1P 0BA Tel: 071-580 4000
Opening Hours: Mon-Fri 9:00am-6:00pm
Late Night: Thursday until 8pm
Fax No: 071-323 4737

SIDCUP SHOP: 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX Tel: 081-302 8811
Opening Hours: Mon-Fri 9:00am-5:30pm
Late Night: Friday until 7pm
Fax No: 081-309 0017

BUSINESS/EDUCATION: 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX Tel: 081-308 0888
Order Lines Open: Mon-Fri 9:00am-6:00pm
Closed on Saturdays
Fax No: 081-308 0608

To: Silica Systems Ltd, Dept ELUSR-0690-32, 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX

PLEASE SEND INFORMATION ON THE AMIGA

Mr/Mrs/Ms: Initials: Surname:

Address:

Postcode: Tel:

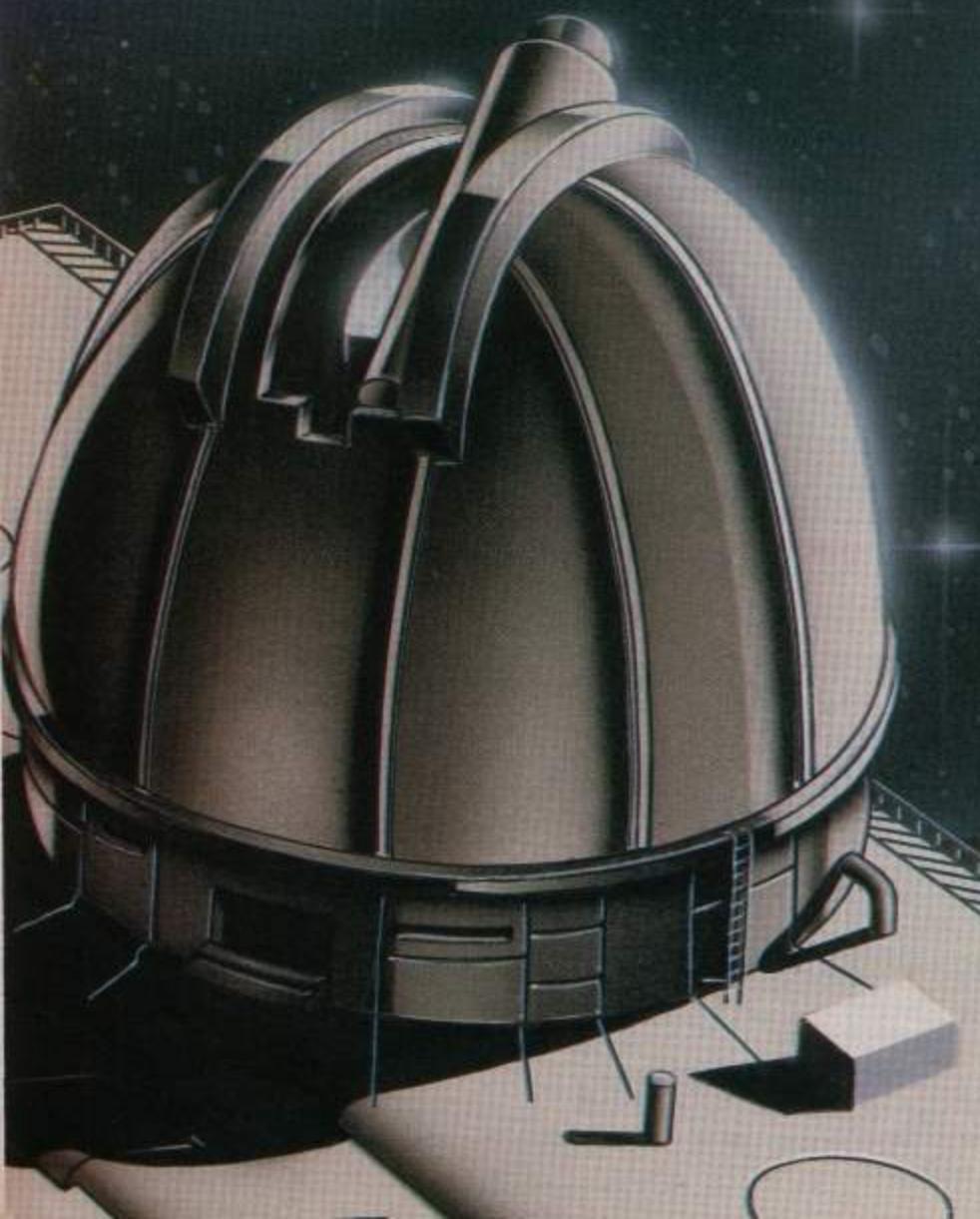
Which computer(s), if any, do you own?

©Silica - Advertised prices and specifications may change - please return the coupon for the latest information.

A2000



Star Trek



Let Darren Bradley beam you up for a beginner's guide to the galaxy

HERE's a package designed to phi-enthuse young astronomers everywhere. With its unique ability to manipulate information, you can study the stars from the comfort of your armchair.

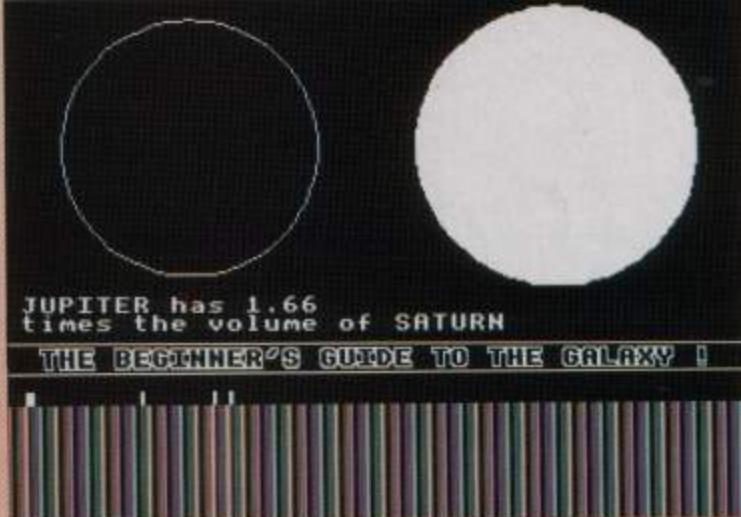
All the information in the program has been compiled from various books and charts available to anyone, but it is now presented in a much clearer and understandable way. It's an ideal introduction to the basics of our solar system.

The software comes in various sections, each giving detailed information on the nine known planets in the system of Sol. You can just browse around all the information as you wish.

Using the routine you can easily compare the volumes of and measure the distance between any two planets. It's just as easy to display the orbital period in eight time phases and also give general background information on the selected body.

So type in the listing and select a planet from the chart displayed. The ease of use and versatility of the software makes it a pleasure to star-gaze and your knowledge of the planets will quickly increase. It's a super package for anyone with an interest in the world that lies beyond your sitting room.

(U:1.00)

ELECTRON USER
PRESENT MODE: MEASURING

Comparing the volumes of planets

0,300:DRAW1279,300:MOVED,900:DRAW1279,
900:MOVE1279,252:DRAW0,252:MOVE340,102
3:DRAW340,900:MOVE340,962:DRAW1279,962
:MOVE1220,900:DRAW1220,962:FORn=0T034
0STEP10

210 MOVEEn,1023:DRAWn,900:NEXT:FORn=9
0T01022STEP10:MOVE0,n:DRAW340,n:NEXT:
GCOL0,0:FORn=994T0962STEP-16:MOVE26,n:
PRINTSTRINGS(9,CHR\$229):NEXT:MOVE42,97
8:GCOL0,1:PRINT"V:1.00)":PROCtx("WELC
OME TO ...",416,868):VDU18,0,1

220 PROCtx("THE BEGINNER'S GUIDE TO
THE GALAXY !",64,290):VDU18,0,1,5:MOVE
362,1005:PRINTSTRINGS(28,CHR\$229):GCOL
0,0:MOVE362,1005:PRINT" ELECTRON U
SER ":"VDU18,0,128,18,0,1:MOVE348,9
47:PRINT"PRESENT MODE":ENDPROC

230:
240 DEFPROCm0:PROCpm(0):VDU28,1,30,3
8,25,12:VDU5:MOVE1235,945:GCOL0,1:VDU6
7,4:PROCpd:PROCke:GCOL4,0:PROCdr(46,1)
:REPEAT:ch\$=xc\$:IFINKEY-98 xc\$=xc\$-5:S
OUND1,-15,150,1

250 IFINKEY-67 xc\$=xc\$+5:SOUND1,-15,
150,1
260 IFINKEY-83 SOUND1,-15,200,1:GCOL
0,0:MOVE1235,945:VDU19,1,3,0,5,229:MOV
E1235,945:VDU18,0,1,67,4
270 IFINKEY-101 SOUND1,-15,100,1:GCO
L0,0:MOVE1235,945:VDU19,1,7,0,5,229:MO

VE1235,945:VDU18,0,1,66,4
280 IFxc\$<1 xc\$=ch\$
290 IFxc\$>45 xc\$=ch\$
300 IFINKEY-74 SOUND1,1,200,2:PROCpm
(xc\$):PROCpm(0)
310 IFte\$ PROCdrII(ch\$):te\$=NOT(te\$)
320 PROCdr(ch\$,xc\$):UNTIL0:ENDPROC
330:
340 DEFPROCtx(a\$,x\$,y\$):LOCALa\$,b\$:
DU18,0,1,5:FORa\$=y\$-4 T0y\$+4 STEP4:FOR
b\$=x\$-4 TOx\$+4 STEP4:MOVEb\$,a\$:PRINTa\$:
NEXT,:GCOL0,0:MOVEb\$,y\$:PRINTa\$:VDU4:
ENDPROC
350:
360 DEFPROCpm(w):VDU18,0,0,5:MOVE796
,947:PRINTsp\$:GCOL0,1:MOVE796,947:PRIN
Tme\$(w):VDU4:ENDPROC
370:
380 DEFPROCdr(o1\$,nw\$):GCOL4,0:MOVEs
x\$(o1\$),sy\$(o1\$):FORn=1T04:DRAWsx\$(o1\$
+n),sy\$(o1\$+n):NEXT:MOVEsx\$(nw\$),sy\$(n
w\$):FORn=1T04:DRAWsx\$(nw\$+n),sy\$(nw\$+n
):NEXT:ENDPROC
390:
400 DEFPROCpm(f\$):ca\$=(f\$/5)+1:CLS:PR
INTTAB(0,0)"Planet Name: ";pl\$(ca\$);T
AB(0,1);"
D>etails, or"."
S>"."
<SPACE-BAR> to continue..."
410 OSCLI"FX21":wa\$=GET:IFwa\$=68 PRO
Cpm(1):PROCde(ca\$):PROCke:ENDPROC
420 IFwa\$=77 PROCpm(2):PROCmes:PROC
ke:ENDPROC
430 IFwa\$=32 PROCke:ENDPROC ELSE410

440:
450 DEFPROCmes:CLS:PRINTTAB(0,0)"Pla
net Name: ";pl\$(ca\$);TAB(0,1);"
<D>ista
nce apart, or"."
<SPACE-BAR> to continue..."
460 OSCLI"FX21":wa\$=GET:IFwa\$=68 PRO
Cmes(f\$,ca\$):PROCke:ENDPROC
470 IFwa\$=83 PROCfi(ca\$):PROCke:ENDP
ROC
480 IFwa\$=32 PROCke:ENDPROC ELSE460
490:
500 DEFPROCme(fm\$,fn\$):a\$=0:q\$=0:qq\$=0
:c\$=0:cc\$=0:ds\$="":ds\$=0:CLS:PRINTTAB
(0,0);"
Measuring from ";pl\$(fm\$);"
to":VDU26,28,1,30,38,26
510 INPUT" > "a\$:co\$=-1:FORn=1T09:IF
a\$=pl\$(n) co\$=n:NEXT ELSENEXT
520 GCOL4,0:IFco\$=-1 ORa\$="" ORa\$=pl
\$(fm\$):CLS:PROCms:GOT0510
530 to\$=((co\$-1)*5)+1:q\$=sx\$(fr\$+1)-
(sx\$(fr\$+1)-sx\$(fr\$))/2:qq\$=sx\$(to\$+
1)-((sx\$(to\$+1)-sx\$(to\$))/2):c\$=q\$+(qq
\$-q\$)/2:cc\$=qq\$+(q\$-qq\$)/2:FORg=0T01:M
OVEsx\$(to\$),sy\$(to\$):FORn=1T04:DRAwsx\$(
to\$+n),sy\$(to\$+n):NEXT:MOVEq\$,sy\$(fr\$
+3)
540 DRAWq\$,450:DRAWqq\$,450:DRAWqq\$,s
y\$(to\$+3):1Fqq\$<q\$ MOVEcc\$,463:VDU5,60
,4 ELSEMOVEcc\$,463:VDU5,62,4
550 ds\$=ABS(dx\$(co\$)-dx\$(fm\$)):ds\$=F
Nco(ds\$):PRINT"Distance between them =
",ds\$;" million kilometres":IFa=0 PRO
Csb:a=1:VDU30:NEXT
560 NEXT:VDU12,26,28,1,30,38,25,12:E
NDPROC
570:
580 DEFPROCms:LOCALa,n:a=RND(4):ONa
GOSUB600,610,620,630
590 FORn=0T0200:NEXT:CLS:ENDPROC
600 PRINT"I'm not having that!":RETUR
RN
610 PRINT"Don't be so stupid!":RETUR
N
620 PRINT"You're not clever you know
!":RETURN
630 PRINT"Trying to confuse me, eh?":
RETURN
640:
650 DEFPROCke:CLS:PRINTTAB(12)::VDU1
7,129,17,0:PRINT< MAIN MENU >:VDU17,
128,17,1:PRINTTAB(8)"Z Move block
left":TAB(7)"X Move block right
":TAB(6)"RETURN Select planet":T
AB(2)"C ... Colour B ... Black & Whi
te":ENDPROC
660:
670 DEFPROCde(n0\$):CLS:PRINTTAB(0,0)
"Planet Name: ";pl\$(n0\$);TAB(0,1);"
<R>
otation time, or"."
Structural detail
s"."
<SPACE-BAR> to continue..."
680 OSCLI"FX21":wa\$=GET:IFwa\$=82 PRO
Cde(n0\$):PROCke:ENDPROC
690 IFwa\$=83 PROCst(n0\$):PROCke:ENDP
ROC
700 IFwa\$=32 PROCke:ENDPROC ELSE680
710:
720 DEFPROCrc:LOCALn,o,k,k1,s%,a%:VD
U24,4,304;1274;896,16,26,24,4,304;1274
,896,28,1,30,38,25:s\$=ro\$(p\$)/8:a\$=-s\$
:PROCrc(1640,600,150,150):VDU18,0,0,5:M
OVE592,632:PRINT"THE":MOVE592,600:PRIN
T"SUN":VDU18,0,1,4:FORn=0T07:VDU29,cx\$
(n);cy\$(n);
730 FORo=0T071STEP4:PL0T69,c(o)*35,s
(o)*35:NEXT:a\$=a\$+s%:ti\$=FNco(a\$):k=10
0+ABS(LEN(ti\$)-2)*32:k1=(LEN(ti\$)*32)/
2:VDU5:IFn=0 MOVE50,32:PRINT,ti\$;" to"
:MOVE50,0:end\$=FNco(ro\$(p\$)):PRINT,end
\$;" days.":NEXT
740 IFn=2 MOVE-k1,75 ELSEIFn=6 MOVE-
k1,-43 ELSEIFn>2 ANDn<6 MOVE-(LEN(ti\$)
)-k,16 ELSE MOVE50,16
750 PRINT,ti\$:NEXT:VDU4:PRINTTAB(0,2

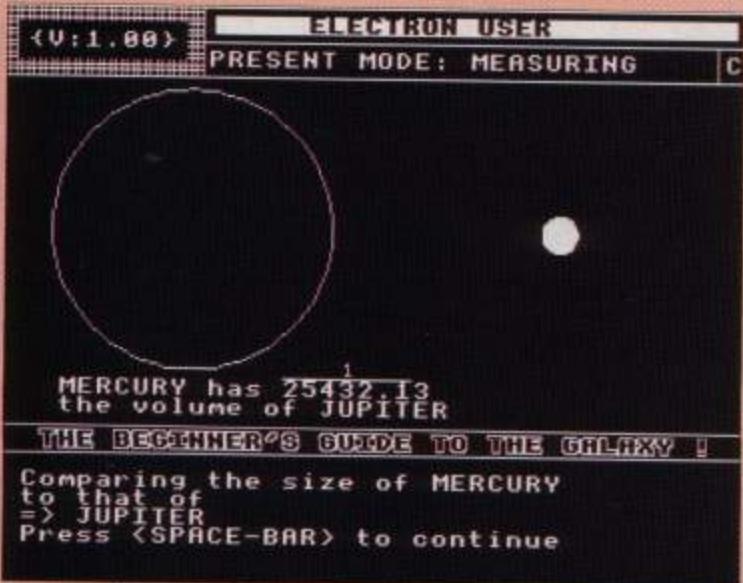


The distance between the two extreme planets

```

) "One year on ";"pl$(p%); is""equal to
) ;"roX(p%); days.":PROCsb:VDU29,0;0;
16,26,28,1,30,38,25,12:PROCpd:ENDPROC
760 :
770 DEFPROCro(p%):CLS:PRINT"Time take for ";"pl$(p%); to complete""one rotation of the sun, in days.":PROCrc:te
X=-1:ENDPROC
780 :
790 DEFPROCsb:PRINT"Press <SPACE-BAR> to continue":REPEATUNTILGET=32:ENDPR
OC
800 :
810 DEFPROCdrII(o%):GCOL4,0:MOVEsx%(o%),sy%(o%):FORn=1TO4:DRAWsx%(o%+n),sy%(o%+n):NEXT:ENDPROC
820 :
830 DEFNco(r%):a$=STR$(r%):IFLEN(a$)<=3 num$=a$:=num$%
840 e=LEN(a$)-3:b$=RIGHT$(a$,3):c$=LEFT$(a$,e):num$=c$+"+"b$:=num$%
850 :
860 DEFNco2(r%):a$=STR$e=0:FORn=1TOLEN(a$):IFMID$(a$,n,1)=".":e=
870 NEXT:IFe>0 r$=LEFT$(a$,e+2)
880 =r$%
890 :
900 DEFPROCst(p%):VDU12,24,4;304,12,74,896,16,26,28,1,21,38,4,12,17,129,17,0:PRINTTAB(2,0);"< STRUCTURAL DETAILS OF ";"pl$(p%); >":VDU17,128,17,1:PRINTTAB(0,2)/* EQUATORIAL DIAMETER:**** PLANETARY GROUP:**
910 PRINT"** TURNS ON AXIS (ie:One day):**** ROTATIONAL DIRECTION:**** PL
ANET'S SURFACE:**** ATMOSPHERIC CONSI
STENCY:":VDU17,129,17,0:i=0:FORn=3TO13
STEP2:PRINTTAB(2,n);de$(p%,i):i=i+1:NEXT:VDU10,17,128,17,1:PROCsb:CLS
920 VDU28,1,30,38,25,24,0,0;1279,1023;:te$=-1:PROCpd:ENDPROC
930 :
940 DEFPROCci(x,y,a,b):FORn=0TO1STE
P2:MOVEEx,y:MOVEEx+c(n)*a,y+s(n)*b:PL0T8
5,x+c(n+2)*a,y+s(n+2)*b:NEXT:ENDPROC
950 :
960 DEFPROCpd:RESTORE1190:PRINT"PLEA
SE WAIT . . .":FORl=0TO200:PL0T69,RND(12
80),RND(600)+300:NEXT:FORl=0TO12:READ
,g,h,i,j:GCOL0,f:PROCci(g,h,i,j):NEXT:
VDU5:GCOL0,0:MOVE194,575:VDU234,8,10,2
35:GCOL0,1:VDU4:CLS:ENDPROC
970 :
980 DEFPROCfi(n%):CLS:VDU24,4;304,12
74,896,16,26,24,4;304,1274;896,28,1,30
,38,25:PRINTTAB(0,0);Comparing the si
ze of ";"pl$(n%)"; to that of":VDU26,28
,1,30,38,27
990 INPUT"= "a$:$o%=-1:FORn=1TO9:IFa
$=pl$(n) o%:n:NEXT ELSENEXT
1000 IFo%=-1 ORa$="" ORa$=pl$(n%):CLS
:PROCns:GOT0990
1010 MOVE325+c(0)*pn%(o%),640+s(0)*pn
%(o%):FORn=0TO72:DRAW325+c(n)*pn%(o%),
640+s(n)*pn%(o%):NEXT:MOVE955+c(0)*pn
%(o%),640+s(0)*pn%(o%):FORn=0TO72:DRAW9
55+c(n)*pn%(o%),640+s(n)*pn%(o%):NEXT:
VDU5:x=955:y=644+s(54)*pn%(o%):a=0:z%
=935-pn%(o%)
1020 zz%=(345+pn%(o%):l%=(z%zz%)/10:l
l=((640+pn%(o%))-(640-pn%(o%)))/4:pr=0
:p=(vo(o%)/vo(o%))/l:pp=p:IFl*p<1 p=
(vo(o%)/vo(o%))/l:pp=p:pr=1
1030 VDU26:REPEAT:IFPOINT(x,y)=0 PLOT
77,x,y:y+=p+pp:PROCpo(pr)
1040 la=:GCOL0,0:MOVEzz%+(la*l%),640
:VDU224,18,0,1:a=a+1:IFa=10 a=0
1050 MOVEzz%+(a*l%),640:VDU224:UNTILP
OINT(x,y):MOVEzz%+(a*l%),640:VDU18,0,0
,224,4,18,0,1:VDU28,1,30,38,25:PRINTTA
B(0,3);:PROCsb:VDU24,4;304,1274;896,16
,26,28,1,30,38,25,12:PROCpd:te$=-1:END
PROC

```



Comparing the volume of the largest planet with the smallest

```

1060 :
1070 DEFPROCpo(a):VDU4:p$=FNco2(p):IF
pr=0 PRINTTAB(1,20);pl$(n%); has ";p$%
;";TAB(1,21);"times the volume of ";
pl$(o%):VDU5:ENDPROC
1080 PRINTTAB(3,20);pl$(n%); has ";C
HR$11;dv$;CHR$10;STRINGS(7,CHR$8);p$;T
AB(3,21);"the volume of ";pl$(o%):VDU5
:ENDPROC
1090 :
1100 DEFPROCship:MOVE300,520:DRAW1000
,520:DRAW900,470:DRAW540,470:MOVE340,4
70:DRAW300,470:DRAW300,520:MOVE320,520
:DRAW320,670:DRAW420,670:DRAW520,570:D
RAW520,520:MOVE520,570:DRAW670,570:DRA
W720,520:MOVE370,495:DRAW570,495:DRAW4
70,420
1110 DRAW270,420:DRAW370,495:VDU4:PRI
NTTAB(1,19);a$;TAB(1,20);a$;TAB(1,21)
;";Press <SPACE-BAR>":FORn=0TO1000:NEX
T:VDU28,1,18,38,6:FORn=1TO15:VDU10:NEX
T:VDU26:REPEAT:OSCLI"FX19":b$=RIGHT$(a
$,37):b1$=RIGHT$(a1$,37):b$=b$+LEFT$(a
$,1)
1120 b1$=b1$+LEFT$(a1$,1):a$=b$:a1$=b
$1:PRINTTAB(1,19);a$;TAB(1,20);a$;UNT
ILINKEY-99:VDU24,4;304,1274;896,16,26:
ENDPROC
1130 :
1140 DATA SCANNING,DETAILS,MEASURING,
MERCURY,88,58,"4,850km",59 DAYS,VENUS,
225,108,"12,140km",247 DAYS,EARTH,365,
150,"12,756km",23 hrs:56 mins,MARS,687
,228,"6,970km",24 hrs:37 mins,JUPITER,
4288,75,778,"142,600km",9 hrs:50 mins,
SATURN
1150 DATA 10767.5,1427,"120,200km",10
hrs:14 mins,URANUS,30660,2870,"49,000
km",10 hrs:49 mins,NEPTUNE,60225,4497,
"50,200km",15 hrs:48 mins,PLUTO,90520,
5900,"6,400km",6 DAYS:9 hrs,4,515,25,5
15,25,480,4,480,4,512,50,555,110,555,1
10,490,50
1160 DATA 490,50,555,170,590,250,590,2
50,515,170,515,170,590,320,615,380,615
,380,540,320,540,320,615,470,765,695,7
65,695,530,470,530,470,765,705,805,995
,805,995,560,705,560,705,805,990,745,1
105,745,1105,630,990,630,990,745,1110,
760,1210
1170 DATA 760,1210,650,1110,650,1110,7
60,1230,720,1265,720,1265,690,1230,690
,1230,720,1,4,SCORCHED ROCK,1,5,NONE,2
,4,HOT ROCK,2,5,CARBON DIOXIDE,3,4,MAN
AGABLE ROCK,3,5,NITROGEN/OXYGEN,4,4,RO
CK/DUST,4,5,MOSTLY NITROGEN,9,4,VERY C
OLD ROCK,9
1180 DATA 5,NONE,30,597,80,9368,100,10
868,60,1773,240,15182986,220,9093101,1
80,616009,190,662384,40,1372
1190 DATA 1,14,497,6,6,1,80,522,22,22,
1,210,552,30,30,1,350,577,20,20,1,582,
647,100,100,0,570,600,12,12,1,850,682,
80,80,1,850,682,130,40,0,850,682,110,3
0,1,850,692,100,30,1,1047,687,40,40,1,
1160,705,41,41,1,1247,705,8,8

```



The well-known rotational for Earth

THE mists of time are fast gathering and a swirling in the air tells me that my time is at an end. Time that is for Pendragon to leave these walls and return once more to my fortress in the hills.

It seems as only a twinkling in the eye that I first put pen to paper and wrote of adventures old and new to you, my steadfast Electron users. Yet four years have passed and it is time for me to move on.

But I must not leave without bidding farewell and extending heartfelt thanks to many friends and allies I have met along the way.

To the readers I must thank both of you! No, seriously, gratitude must especially go to Harry Bastien, Sheila Beattie, Robert Henderson, Martyn Amos, Carys Jones, Emma Rutherford, Craig Romans, Les Shipton, Bill Trevelyan and many others for help and encouragement during my time here – and especially for all the cards and kindnesses during my ill health in 1987.

Special thanks must also go to Robert O'Leary of Robico, Geoff Larsen of Larsoft, and Steve Maltz of Shards for their support, not only to me but in various ways to the Electron as well. They are without doubt the masters of the Electron text adventure.

And a degree of gratitude should also be extended to Roland Waddilove – despite the fact that he often cut my copy with shears when I felt only nail-scissors would do – for his editorial skills, and to my colleague the Mad Hatter for painstaking help and advice whenever it has been needed.

Many have asked my name and who or what I am during these past 46 months, and that secret which is known to just a few, I now feel is time to reveal.

My name is Nic Outterside – a former assistant editor of *Atari ST User* – and my age falls somewhat more than 30 years. I am a father of two lovely children and reside in the wilds of the mountains of North Wales. That is all you need to know, and I hope it has satiated some curiosity.

Another question I am oft asked is what are my favourite Electron adventures. I have, at times, hinted at favourites of mine, and once I believe even detailed a list.

But here for posterity are what I believe to be the best adventures ever released for the Electron – for sanity's sake I have not included any BBC Micro games which happen to run on expanded 64k Electrons.

All are games which I will play again and again until my peripherals eventually wear out and my Electron is called to the great silicon shop in the sky.

They are also deemed as general classics of the genre and I recommend you try to lay your hands on at least a few of them before they are lost for eternity.

If adventures still trouble, be not afraid because my dear friend the Mad Hatter in *The Micro User* magazine has now inherited all of my adventure scrolls and promises to give help and succour to Electron adventurers while carrying out his tasks for BBC Micro users.

In the meantime, while you are all cheering my departure and scratching your heads in puzzlement, I continue my series of maps

ADVENTURES

By Pendragon

End of the never-ending journey

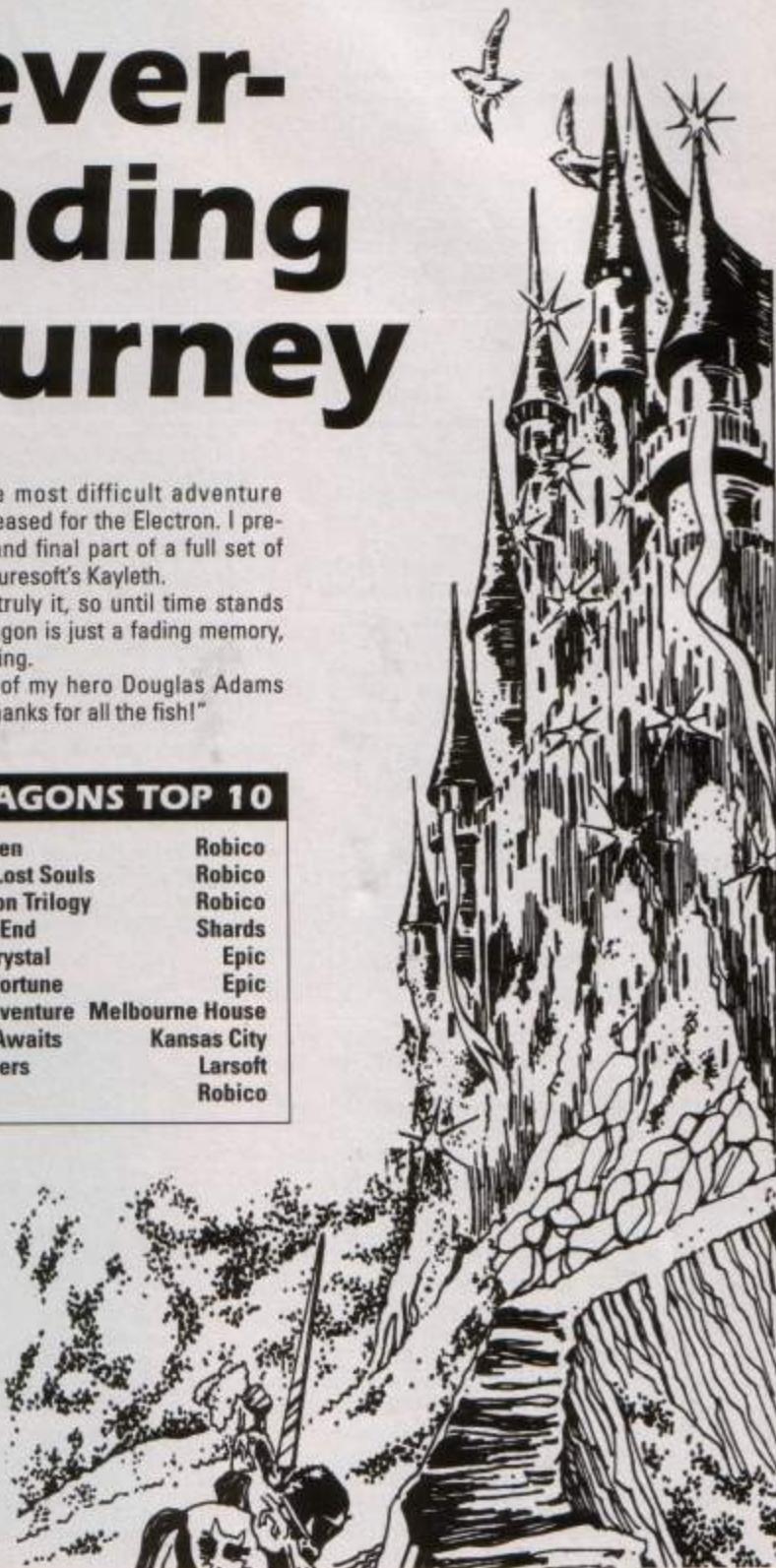
to some of the most difficult adventure games ever released for the Electron. I present the third and final part of a full set of plans to Adventuresoft's *Kayleth*.

Well that is truly it, so until time stands still and Pendragon is just a fading memory, happy adventuring.

Or in words of my hero Douglas Adams "So long, and thanks for all the fish!"

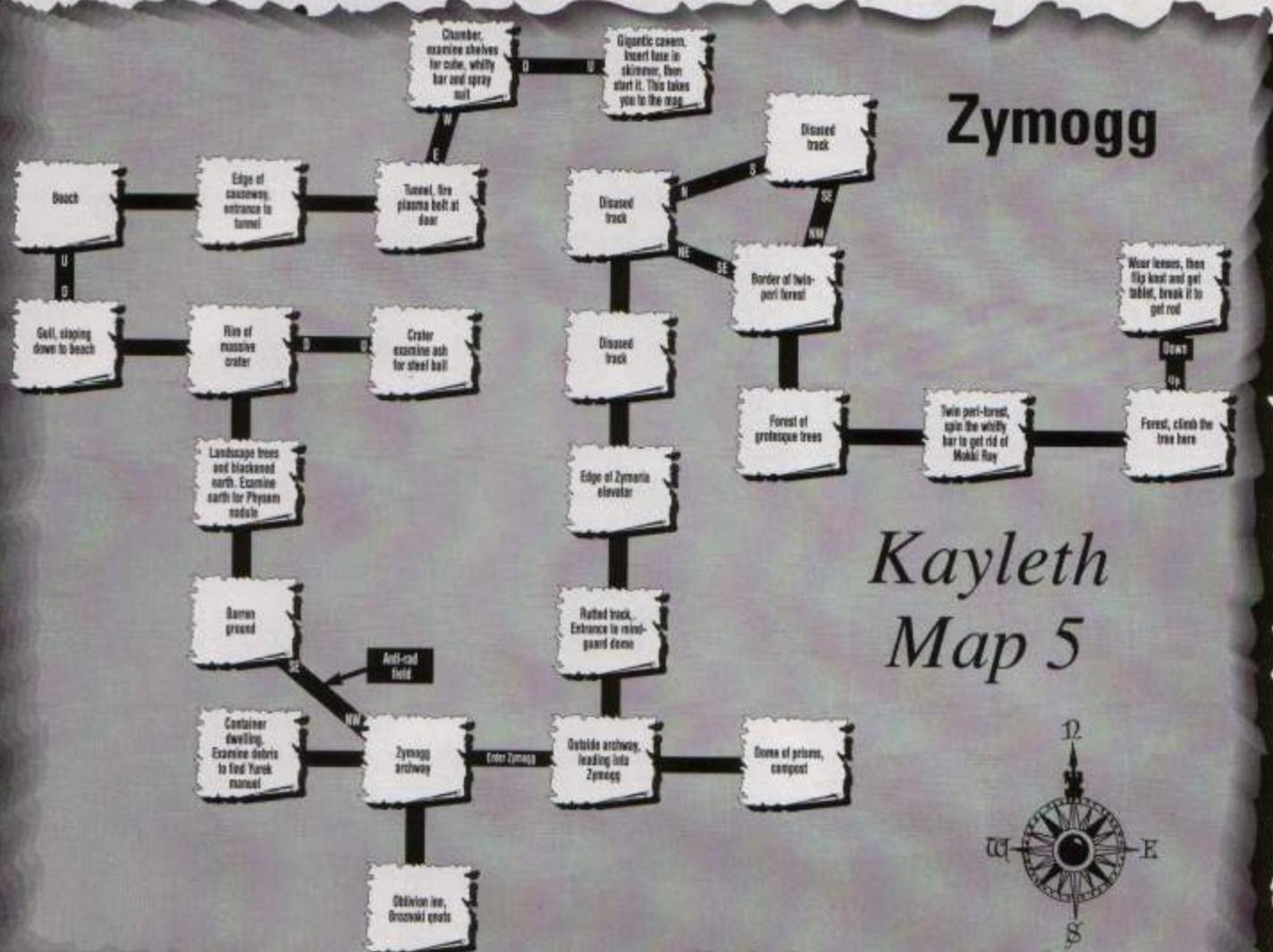
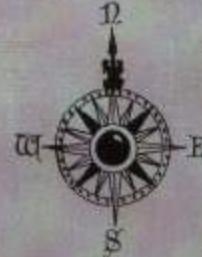
PENDRAGON'S TOP 10

1 Enthar Seven	Robico
2 Village of Lost Souls	Robico
3 Rick Hanson Trilogy	Robico
4 Woodbury End	Shards
5 The Lost Crystal	Epic
6 Wheel of Fortune	Epic
7 Classic Adventure	Melbourne House
8 Ferryman Awaits	Kansas City
9 Nine Dancers	Larsoft
10 The Hunt	Robico



Zymogg

Kayleth Map 5



Readers' Hall of Fame

Colossal Adventure Sheila Beattie

Go South, South, East, West, West and GET DIAMOND. Continue East, East, Down, West, West to the cross-over passages. The pirate will appear at some point here, and when he does you must immediately journey South to the west end of the featureless hall.

Continue East, to the east end of the long hall. Go East to the west end of the Hall of Mists and South into the same maze. Continue East, South, South, South, North and East to the orange column.

Go North-West to the dead end, GET CHEST, GET DIAMOND and go South-East, West, South and Down to the splendid chamber. Now continue East and East.

SAY XYZZY, DROP DIAMOND, DROP CHEST, go East to the small hill and South to be lost in the forest. Travel South by the huge oak tree, and South again to the picnic area. GET SANDWICHES and go North and East.

SAY XYZZY, go West, West, West and Down to GET KEYS. Continue North, North, Down, West, West, DROP SAND, DROP

KEYS and GET BOTTLE. Go West to the Pit Room and West to the pit.

Go Down and WATER PLANT. Journey Up, East and North-East then East. Now go east again to the ante-room, GET GAZETTE, READ GAZETTE. Go East to Witts End and DROP GAZETTE.

Now travel South as many times as you need to get back to the ante-room. Go West, Up, east, East, Down, FILL BOTTLE, Up, West, west, West, West, Down and WATER PLANT.

Journey Up, East, Down to the oil by the well and FILL BOTTLE. Now go Up, West, Down and CLIMB BEAN. Walk West to the Giant's room, North to the rusty gate, OIL GATE and DROP BOTTLE.

Go North and GET TRIDENT, West, Down, South-East and South-East to the Swiss Cheese Room. Now continue North-East, East, North to the Shell Room.

OPEN CLAM, go Down to the sharp walled corridor, Down again into the cul-de-sac and GET PEARL. Go Up, Up, South, Up, East, Up and North. SAY PLUGH, DROP TRIDENT, DROP PEARL and SAY PLUGH again.

Now go South, Down, west, down, West, West and GET SAND, GET KEYS. Continue

North-West, West into the large low room, then go South-West into the twisting corridor.

Travel North onto the rickety bridge and DROP KEY. Go South-West, Down, South-East, South-East, West, West and Down. Now CLIMB BEAN, go west and GET EGG.

Continue North, North, West, Down, South-West and North again to the rickety bridge, North-East, GIVE EGG to troll and GET KEYS. Now SAY FEE, FIE, FOE, FOO.

Go North-East, East to the fork in the path, then go South-East to the steeply sloping limestone passage. Go Down to the barren room, East to FEED BEAR, UNLOCK CHAIN, DROP KEYS and GET BEAR.

Journey West, Up, Up, West, West, THROWN BEAR at the troll, go North-East, East, South-East, Down, East, GET CHAIN and GET KEYS.

Go West, Up, Up, West, West, South-East, South-West, Down and South-East to the Oriental Room. Now go South-East, North-East, East, Up, East, Up and North.

SAY PLUGH, DROP CHAIN and SAY PLUGH again. Now climb the bean and get the eggs, before returning to SAY PLUGH and summon the Elf King.

SPECIAL ANNOUNCEMENT

To celebrate the 7th anniversary of **electron** and  a Grand Draw

will be held for all  customers during June 1990.

£100's of prizes including AP3, Plus 1's, Battery Backed Ram, Basic Editor etc . . .

When placing order please include the 'yes please' corner flash to be included in the draw.

YES
PLEASE



Closing date June 29th.

INCREASE ELECTRON PERFORMANCE AND BBC COMPATIBILITY WITH OUR RANGE OF ADD-ONS

E2P SECOND PROCESSOR

Gives the Electron equivalent performance to a BBC with a Second Processor. Adds a complete processor with its own 64k memory bank to run all programs while the Electron handles screen, keyboard, discs, etc. Gives 30k memory for BASIC programs and 44k memory for HIBASIC programs. (Electron HIBASIC available separately) Gives up to 300% speed increase in programs. Fits into a Plus One/ROMbox Plus slot. Operating system available on ROM or 3.5" ADFS disc or Tape (state requirement) Price £79 + £5 for case

MODE 7 MK2 UNIT

Gives exactly the same Mode 7 display screen as the BBC. Allows BBC Mode 7 software to run on the Electron. Magazine programs, Adventure games, Educational, Wordwise, Prestel, Teletext. Includes Prestel software - Prestel requires a modem and our RS423 adaptor. You will need a ROM socket to hold the Mode 7 ROM, eg. in our RS423 adaptor. For Mode 7 programs with HIMEM above 84000 you will need our Shadow RAM board. Fits inside the Electron, alongside the Shadow RAM board. Price £49 for you to fit, or £59 fitted. Also available as a kit - board and ROM for £25 - you buy the components.

SHADOW RAM BOARD

Our equivalent of the Slogger Master RAM Board, with Turbo and 64K modes. Gives up to 300% speed increase and 28.5k program memory in all screen modes. Fits inside the Electron. Price £59 for you to fit, or £69 fitted.

RS423 SERIAL CARTRIDGE

Connects the Electron to serial RS423/RS232 devices, eg. printers, modems. Allows the transfer of programs, data, etc. from one computer to another. Has the same socket, so uses the same leads as the BBC. Includes a socket for a 32k RAM or 16k ROM, eg. the Mode 7 ROM. Fits into a Plus One/ROMbox Plus slot. Price £29.95 +£5 for a case + £20 for a 32k RAM

ROMPLUS-144 ROM CARTRIDGE

Sideways ROM cartridge with Printer Buffer and RAM Filing System. Holds 8 ROMs or 7 ROMs and a 32k RAM. Fits into a Plus One/ROMbox Plus slot. Price £39 + £20 for a 32k RAM

All prices inclusive of post, etc. - Please allow 28 days delivery.

WE ALSO REPAIR ELECTRONS

JAFAS SYSTEMS
9 Lon-y-Garwa, Caerphilly,
Mid-Glamorgan CF8 1NL.
Tel: 0222 887203



A1 COMPUTER SERVICES

For your Computer Repairs and Supplies

We are Authorised Amstrad Dealers and also an authorised Microvitec Service Centre. Used Equipment bought and sold. We also supply ribbons and discs at discount prices

Leasing and credit facilities available

**9 PADDOCK MOUNT, DAWLEY,
TELFORD, SHROPSHIRE. TF4 3PR**



**Tel: 0952-502737
Fax: 0952 630110**



YOU have been kidnapped by the Black Acorn – an interdimensional being who intends to rule the universe. His plan is to shanghai innocent people and convert them into pawns to serve in his Black Guards.

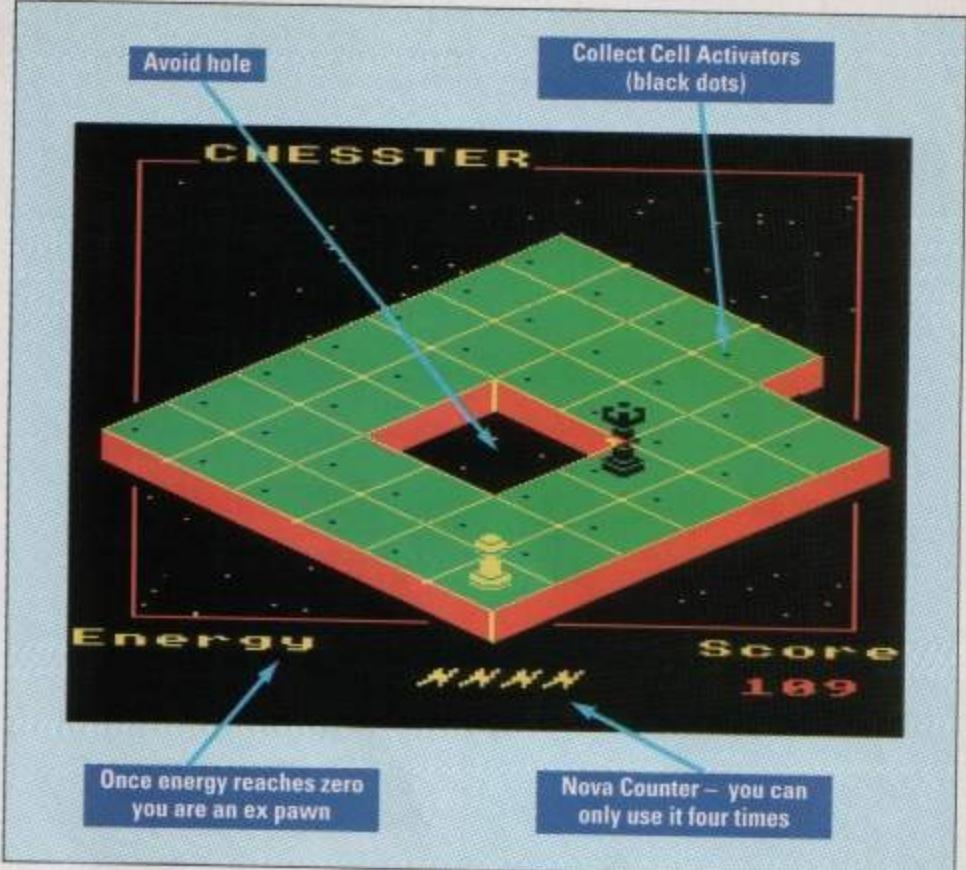
But you have escaped and located the ion panels which supply the whole of his empire with power. Each cell of the panels has a black activator which you can short circuit merely by landing on it.

Clear each panel three times and you'll move on to the next even harder one. And you'll find the guards even faster, so take care.

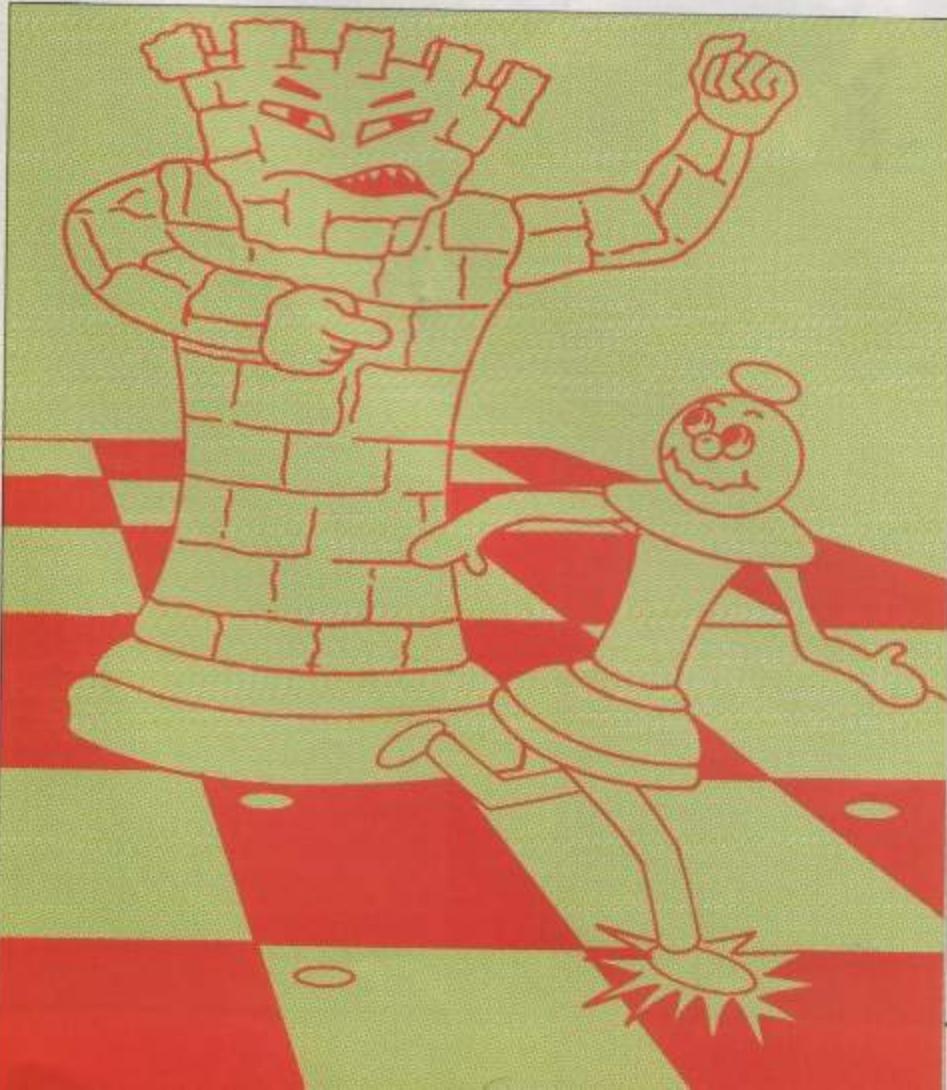
To help you in your quest you can use your stolen Nova device. By pressing the spacebar you'll draw a bolt of energy from nearby stars. This will replenish your power and repel any guards.

However, Nova will only function four times, so use it with care. Leaving the board will cause your Gyro Pak to operate, so if you're quick, you can return. This will reduce your energy, as will near proximity to one of the power-sapping guards.

If the energy bar reaches zero your mission is ended. Can you succeed? Type in the listing and find out!



CHESSTER



Chess pieces move in new ways in this action-packed game from Lyn Davies

```

10 REM CHESSTER
20 REM By Lyn Davies
30 REM (c) Electron User
40 IF PAGE>8E00 GOTO t330
50 MODE5:BIN Q2 5000:VDU5:SI=0:ENVE
LOPE1,129,-15,-8,-3,10,10,10,126,0,0,-
126,126,126:VDU23,7,0,0;0,0;0,:ENVELOPE2
,1,6,6,6,2,2,1,120,0,0,-126,126,126:HZ
=200
60 PROCstart:REPEAT:CALLloop
70 IFPOINT((1870+?871*255)+32,(1872
+?873*255)-48)<>3CALLsound:GOT090
80 IFPOINT((1874+?875*256),(1876+?8
77*256))=DCALLpoint:SOUND1,2,100,1:TI-
T2+1:RX=RX+1:PROCscore
90 IF?882<48PROCend
100 IFTIME>UXCALLtend:TIME=0
110 UNTILFALSE
120 END
130 DEFPROCshot:VDU5:IX=540:GCOL0,2:
REPEAT:MOVEIX,100:VDU231:IX=IX+64:UNTI
LIZ=796:ENDPROC
140 DEFPROCstart:VDU23,224,24,60,60,
90,102,126,126,23,225,24,36,60,60,
60,60,60,23,226,126,189,219,231,126
,189,66,60,23,227,0,0,0,0,0,0,0,23,2
28,24,60,60,90,102,126,126,126,23,229

```

24,36,60,60,60,60,60,60
 150 VDU23,230,126,189,219,231,126,18
 9,66,60,23,231,9,27,26,62,60,108,200,1
 36:PROCins:REPEAT:PROCtune:FORE=OT0200
 :NEXT:UNTILINKEY(-99):FORE=OT033:VDU30
 ,11:FOR=OT050:NEXTF:NEXTE:PROCffirst:E
 NDPROC
 160 DEFPROCins:VDU4:FORE=OT033:COLOU
 RRND(3):PRINTTAB(0,30)***ELECTRON**US
 ER***":NEXT:VDU5,18,0,0:MOVE320,416:DR
 AW960,416:PL0T85,960,896:MOVE320,416:D
 RAW960,896:PL0T85,320,896:GC0L0,1:MOVE
 320,416:DRAW320,896:DRAW960,896:DRAW96
 0,416
 170 DRAW320,416:GC0L0,2:MOVE608,640:
 VDU226,8,11,225,8,11,224:VDU4:COLOUR2:
 PRINTTAB(7,8)"A":PRINTTAB(12,8)***:PRI
 NTTAB(7,13)***:PRINTTAB(12,13)***:COLO
 UR1:PRINTTAB(6,6)"CHESTER":PRINTTAB(7
 ,16)"SPACE-":CHR\$231
 180 VDU19,3,2,0,:COLOUR3:PRINTTAB(8,
 12)"/":PRINTTAB(11,12)"/":PRINTTAB(11,
 9)"/":PRINTTAB(8,9)"/":VDU5:GC0L0,3:MO
 VE336,428:DRAW948,428:DRAW948,884:DRAW
 336,884:DRAW336,428:VDU4:ENDPROC
 190 DEFPROCfirst:VDU19,1,0,0,:VDU19,
 2,0,0,:VDU19,3,0,0,:PROCstar:PROCbase:
 PROCshot:PROCvar:PROCcode:CALLgauge:TX
 =0:UX=90:RX=0
 200 PROCscore:PROCdot:VDU19,1,1,0,:V
 DU19,2,3,0,:VDU19,3,2,0,:FORE=OT02000:
 NEXT:CALLprint:CALLrook:ENDPROC
 210 DEFPROCscore:VDU4:COLOUR1:PRINTT
 AB(16,29):TX:VDU5
 220 IFTX=36:FORE=16OT0100STEP-4:SOUN
 D1,2,E,2:NEXT:FORE=OT03000:NEXT:CALLro
 ok:RX=0:UX=90:UX=3:878=142:879=5:87A=3
 :87B=3:87E=24:87F=21:PROCbaddie:PRO
 Cchoose
 230 IFU%<6U%<6
 240 ENDPROC
 250 DEFPROCscr:VDU4:VDU28,0,26,19,0:
 FORE=OT0100STEP4:SOUND1,2,F,2:NEXTF:FO
 RE=OT030:VDU30,11:NEXT:VDU26:VDU5:VDU1
 9,1,0,0,:VDU19,2,0,0,:VDU19,3,0,0,:PRO
 Cstar:PROCbase:ENDPROC
 260 DEFPROCchoose:CALLprint:87D=110
 :87E=2:87F=15:87G=1:87H=16:87I=11
 270 IFTX=576PROCwin:ENDPROC
 280 IFTX=540VDU4:PRINTTAB(3,4)"Showd
 own!":VDU5:PROCscr
 290 IFTX=432VDU4:PRINTTAB(3,4)"Level
 Five":VDU5:PROCscr
 300 IFTX=324VDU4:PRINTTAB(3,4)"Level
 Four":VDU5:PROCscr
 310 IFTX=216VDU4:PRINTTAB(3,4)"Level
 Three":VDU5:PROCscr
 320 IFTX=108VDU4:PRINTTAB(3,4)"Level
 Two":VDU5:PROCscr
 330 VDU19,1,0,0,:VDU19,2,0,0,:VDU19,
 3,0,0,:PROCdot:CALLprint
 340 IFTX>539PROCbole:PROCfive:GOT039
 0
 350 IFTX>431PROCbole:PROCfour:GOT039
 0
 360 IFTX>323PROCbole:PROCthree:GOT03
 90
 370 IFTX>215PROCbole:PROCtwo:GOT0390
 380 IFTX>107PROCbole:PROCone:GOT0390
 390 VDU19,1,1,0,:VDU19,2,3,0,:VDU19,
 3,2,0,:ENDPROC
 400 DEFPROCwin:FORE=OT03000:NEXT:VDU
 4:COLOUR3:FOR=OT06:FORG=OT04:PRINTTAB
 (0,31):NEXTG:FORE=1TO18STEP2:PRINTTAB(1
 ,27)CHR\$227:PRINTTAB(1,28)CHR\$228:PRI
 NTTAB(1,29)CHR\$229:PRINTTAB(1,30)CHR\$2
 30:NEXT:NEXTF
 410 VDU5:GC0L0,2:MOVE256,480:DRAW960
 ,480:PL0T85,256,864:MOVE256,864:DRAW96
 0,480:PL0T85,960,864:GC0L0,1:MOVE256,4

80:DRAW256,864:DRAW960,864:DRAW960,480
 :DRAW256,480
 420 VDU4:COLOUR1:COLOUR130:PRINTTAB(1
 ,5,7)"WELL DONE!":PRINTTAB(6,9)"You hav
 e":PRINTTAB(5,11)"saved the":PRINTTAB(7
 ,13)"World!":REPEAT:FORE=OT0150:NEXTE
 :PROCtune:UNTILINKEY(-99):COLOUR128:PR
 OCstart:ENDPROC

430 DEFPROCbole:GC0L0,0:MOVE504,475:
 DRAW796,475:PL0T85,650,550:MOVE504,475
 :DRAW796,475:PL0T85,650,400:GC0L0,1:MO
 VE450,500:DRAW500,475:PL0T85,650,550:M
 OVE450,500:DRAW650,600:PL0T85,650,550:
 MOVE800,475:DRAW850,500:PL0T85,650,550
 440 MOVE850,500:DRAW650,600:PL0T85,6
 50,550:GC0L0,2:MOVE650,550:DRAW650,600
 :DRAW450,500:DRAW650,400:DRAW850,500:D
 RAW650,600:PL0T69,600,450:PL0T69,650,5
 00:PL0T69,725,475:ENDPROC

450 DEFPROCbaddie
 460 IFTX=108VDU23,227,24,24,195,195,
 153,153,219,255,23,228,126,60,24,36,60
 ,60,60,126,23,229,126,60,24,36,60,60,6
 0,126,23,230,219,102,189,219,231,126,6



0,24
 470 IFTX=216VDU23,227,72,72,108,124,
 126,108,126,114,23,228,126,126,74,96,1
 12,62,94,96
 480 IFTX=324VDU23,227,24,36,60,94,78
 ,102,118,126,23,228,126,60,24,36,60,60
 ,126
 490 IFTX=432VDU23,227,24,90,129,231,
 189,165,165,231,23,228,255,255,255,126
 ,24,36,60,90,23,229,231,126,60,24,36,6
 0,60,126,23,230,255,126,189,219,231,12
 6,60,24
 500 IFTX=540VDU23,227,0,0,0,24,60,12
 6,126,255,23,228,255,255,255,255,255,2
 55,255,255,23,229,255,126,189,195,255,
 255,126,126,23,230,60,24,192,248,124,1
 4,1,0
 510 ENDPROC
 520 DEFPROCone:GC0L0,3:MOVE650,800:D
 RAW1050,600:PL0T85,1150,650:MOVE650,80
 0:DRAW750,850:PL0T85,1150,650:GC0L0,1:
 MOVE1150,582:DRAW1058,600:PL0T85,1150,
 600:MOVE1150,650:DRAW1050,600:PL0T85,1
 150,600
 530 GC0L0,0:PL0T69,1000,650:PL0T69,9
 00,700:PL0T69,800,750:PL0T69,700,800
 540 GC0L0,2:MOVE650,800:DRAW1050,600:
 DRAW1150,650:DRAW750,850:DRAW650,800:
 MOVE750,750:DRAW850,800:MOVE850,700:D
 RAW950,750:MOVE950,650:DRAW1050,700:MO
 VE1250,500:DRAW1050,600:ENDPROC

550 DEFPROCTwo:GC0L0,3:MOVE250,400:D
 RAW350,250:PL0T85,150,350:MOVE250,400:
 DRAW350,250:PL0T85,450,300:GC0L0,1:MO
 VE150,350:DRAW350,200:PL0T85,150,300:M
 OVE450,300:DRAW350,200:PL0T85,350,250:
 560 MOVE450,300:DRAW350,200:PL0T85,4
 50,250:MOVE1050,600:DRAW1150,600:PL0T8
 5,1100,575:MOVE1050,600:DRAW1150,600:P
 L0T85,1150,650:GC0L0,3:MOVE1150,650:DR
 AW850,700:PL0T85,1050,600:MOVE1150,650
 :DRAW850,700:PL0T85,950,750
 570 GC0L0,2:MOVE250,400:DRAW450,300:
 DRAW350,250:DRAW150,350:DRAW250,400:M
 OVE350,250:DRAW350,200:MOVE1150,550:DRA
 W850,700:DRAW950,750:DRAW1150,650:DRA
 W1050,600
 580 MOVE250,300:DRAW350,350:MOVE950,
 650:DRAW1050,700:GC0L0,0:PL0T69,200,35
 0:PL0T69,300,300:PL0T69,1000,650:PL0T6
 9,900,700:ENDPROC
 590 DEFPROCthree:GC0L0,3:MOVE450,700
 :DRAW250,800:PL0T85,350,850:MOVE450,70
 0:DRAW350,850:PL0T85,550,750:MOVE850,
 700:DRAW950,850:PL0T85,1050,800:GC0L0,
 1:MOVE900,675:DRAW1050,800:PL0T85,1050
 ,750
 600 MOVE900,675:DRAW1050,800:PL0T85,
 850,700:MOVE450,700:DRAW250,750:PL0T85
 ,400,675:MOVE450,700:DRAW250,750:PL0T85
 ,5,250,800:GC0L0,2:MOVE950,650:DRAW750,
 750:DRAW950,850:DRAW1050,800:DRAW850,7
 00:MOVE950,850:PL0T85,1050,800:GC0L0,
 1:MOVE900,675:DRAW1050,800:PL0T85,1050
 ,750
 610 MOVE350,650:DRAW550,750:DRAW350,
 850:DRAW250,800:DRAW450,700:MOVE350,75
 0:DRAW650,800:GC0L0,0:PL0T69,300,800:P
 L0T69,400,750:PL0T69,800,750:PL0T69,90
 0,800:ENDPROC
 620 DEFPROCfour:GC0L0,3:MOVE350,250:
 DRAW350,350:PL0T85,250,300:MOVE350,250
 :DRAW350,350:PL0T85,450,300:MOVE1050,3
 00:DRAW1050,400:PL0T85,950,350:MOVE105
 0,300:DRAW1050,400:PL0T85,1150,350:MOV
 E850,700:DRAW850,800:PL0T85,750,750
 630 MOVE850,700:DRAW850,800:PL0T85,9
 50,750:MOVE250,600:DRAW250,700:PL0T85,
 350,650:MOVE250,600:DRAW250,700:PL0T85
 ,150,650:GC0L0,1:MOVE250,250:DRAW450,2
 50:PL0T85,350,200:MOVE250,300:DRAW350,
 250:PL0T85,250,250:MOVE450,300:DRAW450
 ,250
 640 PL0T85,350,250:MOVE950,300:DRAW1
 150,300:PL0T85,1050,250:MOVE1150,350:D
 RAW1150,300:PL0T85,1050,300:MOVE950,35
 0:DRAW950,300:PL0T85,1050,300:MOVE900,
 675:DRAW850,700:PL0T85,950,700:MOVE850
 ,700:DRAW950,700:PL0T85,950,750
 650 MOVE200,575:DRAW250,600:PL0T85,1
 50,600:MOVE150,650:DRAW150,600:PL0T85,
 250,600:GC0L0,2:MOVE550,250:DRAW350,35
 0:DRAW250,300:DRAW350,250:DRAW450,300:
 MOVE850,300:DRAW1050,400:DRAW1150,350:
 DRAW1050,300:DRAW950,350:MOVE950,650:D
 RAW750,750
 660 DRAW850,800:DRAW950,750:DRAW850,
 700:MOVE150,550:DRAW350,650:DRAW250,70
 0:DRAW150,650:DRAW250,600:GC0L0,0:PL0
 T69,300,300:PL0T69,1000,350:PL0T69,800,
 750:PL0T69,200,650:ENDPROC
 670 DEFPROCfive:GC0L0,3:MOVE350,750:
 DRAW350,850:PL0T85,250,800:MOVE350,750
 :DRAW350,850:PL0T85,450,800:MOVE350,75
 0:DRAW550,850:PL0T85,450,800:MOVE550,7
 50:DRAW550,850:PL0T85,650,800:MOVE750,
 750:DRAW750,850:PL0T85,650,800
 680 MOVE750,750:DRAW750,850:PL0T85,8
 50,800:MOVE950,750:DRAW950,850:PL0T85,
 850,800:MOVE950,750:DRAW950,850:PL0T85
 ,1050,800:GC0L0,1:MOVE250,800:DRAW250,
 750:PL0T85,350,750:MOVE250,750:DRAW450
 ,750:PL0T85,350,700
 690 MOVE350,750:DRAW550,750:PL0T85,4

```

50,800:MOVE450,750:DRAW550,750:PL0T85,
500,725:MOVE750,750:DRAW850,750:PL0T85
,800,725:MOVE750,750:DRAW950,750:PL0T85
5,850,800:MOVE850,750:DRAW1050,750:PL0
T85,950,700:MOVE1050,750:DRAW1050,800
700:PL0T85,950,750:GC0L0,2:MOVE850,7
00:DRAW450,700:MOVE250,800
:DRAW350,850:DRAW550,750:DRAW750,850:DR
AW950,750:DRAW1050,800:DRAW950,850:DR
AW750,750:DRAW550,850:DRAW350,750:DRAW
250,800
710:GC0L0,0:PL0T69,300,800:PL0T69,50
0,800:PL0T69,700,800:PL0T69,900,800:EN
DPROC
720 DEFPROCend:COLOUR1:PROChana:FORE
=OT04000:NEXTE:VDU4:FORE=OT040:PRINTTA
B(0,31):FORF=OT050:NEXTF:NEXTE:PRINTTA
B(4,10)"Power Cells":COLOUR3:PRINTTAB
(8,12);TX:COLOUR2:VDU5:MOVE200,300:DRA
W200,750:DRAW1050,750:DRAW1050,300:DRA
W200,300
730 VDU4:FORE=2T017STEP3:PRINTTAB(E,
2)CHR$227:PRINTTAB(E,26)CHR$227::PRINT
TAB(E,3)CHR$228:PRINTTAB(E,27)CHR$228:
PRINTTAB(E,4)CHR$229:PRINTTAB(E,28)CHR
$229:PRINTTAB(E,5)CHR$230:PRINTTAB(E,2
9)CHR$230:NEXTE
740 IFT2>H2THENH2=TX
750 COLOUR1:PRINTTAB(4,18)"Max.Damag
e!":COLOUR3:PRINTTAB(8,20);H2:REPEAT:F
ORE=OT0150:NEXTE:PROCtune:UNTILINKEY(-
99):FORE=OT040:PRINTTAB(0,31):FORF=OT0
50:NEXTF:NEXTE:PROCstart:ENDPROC
760 DEFPROCnana:FORE=OT01000:NEXT:SD
UND1,-15,52,10:SOUND1,-15,40,10:SOUND1
,-15,60,5:SOUND1,-15,52,10:SOUND1,-15,
40,10:ENDPROC
770 DEFPROCtune:SZ=SZ+1
780 IF$1=36RESTORE800:SZ=0
790 READN:SOUND1,-15,N,2
800 DATA52,60,68,80,72,72,88,80,80,1
00,96,100,80,68,52,60,68,72,80,88,80,7
2,68,60,68,52,48,52,60,32,48,60,72,68,
60,68
810 ENDPROC
820 DEFPROCdot:GC0L0,0:X=600:Y=750
:FORF=OT05:FORE=OT05:PL0T69,XX,YX:XX=X
Y-100:YX=YX-50:SOUND1,-15,YXDIV3,1:NEX
TE:XX=XX+700:YX=YX+250:NEXTD:ENDPROC
830 DEFPROCbase:GC0L0,3:MOVE50,500:D
RAW650,800:PL0T85,1250,500:MOVE50,500:
DRAW650,200:PL0T85,1250,500
840 GC0L0,1:MOVE50,500:DRAW650,200:P
LOT85,650,150:MOVE50,500:DRAW650,150:P
LOT85,50,450:MOVE650,150:DRAW1250,500:
PL0T85,650,200:MOVE650,150:DRAW1250,50
0:PL0T85,1250,450
850 GC0L0,2:AZ=650:BX=800:FORE=OT06:
MOVEA1,BX:DRAWAZ+600,BX-300:AZ=AZ-100:
BX=BX-50:NEXTE
860 AZ=650:BX=800:FORE=OT06:MOVEA1,B
X:DRAWAZ-600,BX-300:AZ=AZ+100:BX=BX-50
:NEXTE:MOVE650,200:DRAW650,150
870 GC0L0,1:MOVE100,550:DRAW100,960:
DRAW1200,960:DRAW1200,550:MOVE1200,400
:DRAW1200,180:DRAW750,180:MOVE550,180:
DRAW100,180:DRAW100,400
880 VDU4:COLOUR2:PRINTTAB(3,1)"CHESS
TER":PRINTTAB(15,27)"Score":PRINTTAB(0
,27)"Energy":VDU5
890 ENDPROC
900 DEFPROCstar:GC0L0,2:FORE=OT0100:
PL0T69,100+RND(1100),180+RND(770):NEXT
:ENDPROC
910 DEFPROCvar:?=770=110:?=771=2:?=772=
15:?=773=1:pr=&FFEE:key=&FF0:fx=&FFF4:
word=&FFF1:?=778=142:?=779=5:?=77A=3:?=77B
=3:?=77C=3:?=77D=16:?=77E=24:?=77F
=21:?=880=0:?=881=15:?=882=252:?=884=0:?=88
5:?=886=80C
920 ?&900=0:?=901=0:?=902=1:?=903=0:
?=904=4:?=905=0:?=906=1:?=907=0:?=908=

```

```

1:?=909=0:?=90A=1:?=90B=0:?=90C=80:?=89
0D=0:?=90E=5:?=90F=0:ENDPROC
930 DEFPROCcode:FORE=OT02STEP2:PX=QZ
940 COPT
950 .print:LDA#25:JSRpr:LDA#4:JSRpr:
LDA#70:JSRpr:LDA#71:JSRpr:LDA#72:JSRpr
:LDA#73:JSRpr:LDA#18:JSRpr:LDA#3:JSRpr
:LDA#1:JSRpr:LDA#226:JSRpr:LDA#8:JSRpr
:LDA#11:JSRpr:LDA#225:JSRpr:LDA#8:JSRpr
:LDA#11:JSRpr:LDA#224:JSRpr:JSRspot:R
TS
960 .spot:LDA#70:SEC:SBC#20:STA#74:L
DA#71:SBC#00:STA#75:LDA#72:SEC:SBC#20:
STA#76:LDA#73:SBC#00:STA#77:RTS
970 .point:LDA#18:JSRpr:LDA#0:JSRpr:
LDA#3:JSRpr:LDA#25:JSRpr:LDA#69:JSRpr
:LDA#74:JSRpr:LDA#75:JSRpr:LDA#76:JSRpr
:LDA#77:JSRpr:RTS
980 .loop:JSRup:JSRdit:JSRup:JSRdr
:JSRret:JSRsame:RTS
990 .up:LDA#15:LDX#1:LDY#0:JSRpr:L
D#129:LDX#190:LDY#&FF:JSRfx:BCSul:RTS
1000 .ul:JSRprint:LDA#70:SEC:SBC#100:
STA#70:LDA#71:SBC#0:STA#71:LDA#72:CLC

```

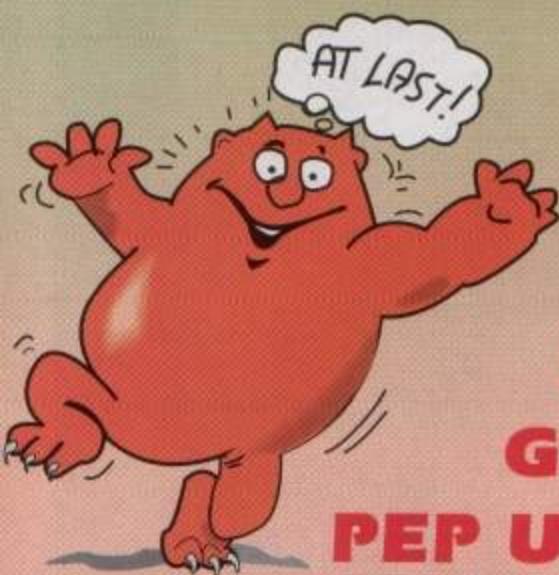


```

pr:LDA#0:JSRpr:JSRpr:JSRpr:JSRrook:JSR
bomb:LDX#84:INX:STX#84:RTS
1100 .bomb:LDA#7:LDX#8:LDY#89:JSRwop
d:JSRtoken:JSRzap:LDA#7A:SEC:SBC#65:ST
A#7A:LDA#7B:SBC#1:STA#7B:JSRzap:LDA#14
2:STA#78:LDA#5:STA#79:LDA#3:STA#7A:STA
#7B:LDA#24:STA#7E:LDA#21:STA#7F:RTS
1110 .token:LDA#18:JSRpr:LDA#0:JSRpr:
JSRpr:LDA#25:JSRpr:LDA#4:JSRpr:LDA#86:
JSRpr:LDA#85:JSRpr:LDA#100:JSRpr:LDA#0
:JSRpr:LDA#231:JSRpr:LDA#86:SEC:SBC#84
0:STA#86:LDA#85:SBC#0:LDA#85:RTS
1120 .rook:LDA#25:JSRpr:LDA#4:JSRpr:L
DA#78:JSRpr:LDA#79:JSRpr:LDA#7A:JSRpr:
LDA#3:JSRpr
1130 LDAN230:JSRpr:LDA#8:JSRpr:LDA#11
:JSRpr:LDA#229:JSRpr:LDA#8:JSRpr:LDA#1
1:JSRpr:LDA#228:JSRpr:LDA#8:JSRpr:LDA#8
111:JSRpr:LDA#227:JSRpr:RTS
1140 .tail:JSRrook:JSRup:JSRdown:JSR
left:JSRright:JSRrook:LDA#0:STA#80:RTS
1150 .left:LDA#7C:CMF#7E:BCCbL:RTS
1160 .right:LDA#7E:CMF#7C:BCCbr:RTS
1170 .down:LDA#7D:CMF#7F:BCCbd:RTS
1180 .up:LDA#7F:CMF#7D:BEQequal:RTS
1190 .same:LDA#7F:CMF#7D:BEQnequal:RTS
1200 .equal:LDA#7E:CMF#7C:BEQsound:BE
Qsound:BEQsound:RTS
1210 .sound:LDA#7:LDX#0:LDY#89:JSRwop
d:JSRenergy:JSRenergy:RTS
1220 .bl:LDA#78:SEC:SBC#200:STA#78:LD
A#79:SBC#0:STA#79:LDX#7E:DEX:DEX:STX#7
E:RTS
1230 .bd:LDA#7A:SEC:SBC#100:STA#7A:LD
A#7B:SBC#0:STA#7B:LDX#7F:DEX:DEX:STX#7
F:RTS
1240 .br:LDA#78:CLC:ADC#200:STA#78:LD
A#79:ADC#0:STA#79:LDX#7E:INX:INX:STX#7
E:RTS
1250 .bu:LDA#7A:CLC:ADC#100:STA#7A:LD
A#7B:ADC#0:STA#7B:LDX#7F:INX:INX:STX#7
F:RTS
1260 .energy:LDA#25:JSRpr:LDA#4:JSRpr
:LDA#82:JSRpr:LDA#0:JSRpr:LDA#80:JSRpr
:LDA#0:JSRpr:LDA#25:JSRpr:LDA#7:JSRpr
:LDA#82:JSRpr:LDA#0:JSRpr:LDA#40:JSRpr
:LDA#0:JSRpr:LDA#82:DEX:DEX:DEX:STX#7
82:RTS
1270 .gauge:LDA#252:STA#82:LDA#18:JS
pr:LDA#0:JSRpr:LDA#1:JSRpr:LDA#25:JSRpr
:LDA#4:JSRpr:LDA#50:JSRpr:LDA#0:JSRpr
:LDA#80:JSRpr:LDA#0:JSRpr:LDA#25:JSRpr
:LDA#5:JSRpr:LDA#255:JSRpr:LDA#0:JSRpr
:LDA#80:JSRpr:LDA#0:JSRpr:LDA#25:JSRpr
:LDA#85
1280 JSRpr:LDA#50:JSRpr:LDA#0:JSRpr:L
DA#40:JSRpr:LDA#0:JSRpr
1290 LDAN25:JSRpr:LDA#4:JSRpr:LDA#50:
JSRpr:LDA#0:JSRpr:LDA#40:JSRpr:LDA#0:J
SRpr:LDA#25:JSRpr:LDA#5:JSRpr:LDA#255:
JSRpr:LDA#0:JSRpr:LDA#80:JSRpr:LDA#0:J
SRpr:LDA#25:JSRpr:LDA#85:JSRpr:LDA#255
:JSRpr:LDA#0:JSRpr:LDA#40:JSRpr:LDA#0:
JSRpr:RTS
1300 .zap:LDA#18:JSRpr:LDA#3:JSRpr:L
D#2:JSRpr:LDX#0:.again:LDA#25:JSRpr:L
D#4:JSRpr:LDA#78:JSRpr:LDA#79:JSRpr:L
D#7A:JSRpr:LDA#7B:JSRpr:LDA#78:CLC:ADC
#64:STA#78:LDA#79:ADC#0:STA#79
1310 LDAN25:JSRpr:LDA#5:JSRpr:LDA#78:
JSRpr:LDA#79:JSRpr:LDA#7A:JSRpr:LDA#7B
:JSRpr:LDA#7A:CLC:ADC#8:STA#7A:LDA#7B:
ADC#0:STA#7B:LDA#78:SEC:SBC#64:STA#78:
LDA#79:SBC#0:STA#79:INX:CPX#40:BNEagai
n:RTS
1320 J:NEXT:ENDPROC
1330 *KEYD*T.|MDX=PAGE-8E00:FOR I%=
PAGE TO TOP:STEP4:(I%-1)=!I%:NEXT:PA
GE=8E00|MOLD|MRUN|M
1340 PRINTTAB(14,20)"Just a no!"
1350 *FX138,0,128

```

Announcing something completely different users of the Electron



**BATTLE WITH BASIC!
LEARN ABOUT LOGO!
SUCCEED WITH SCIENCE!
GET AHEAD WITH GAMES!
PEP UP YOUR PROGRAMMING!
PLUS PUZZLES AND PRIZES GALORE!**

Let's Compute! brings an exciting new dimension to computing. You'll find it full of fun things to try out on your Electron. It will help you get to grips with Basic and explore the mysteries of Logo. You'll discover fascinating ways of linking your Electron to the outside world.

Even show you, month by month, how to write your own mega-game. Plus lots of surprises! Never before has there been a computer magazine like *Let's Compute!* You'll find its action-packed pages crammed with enough hints, tips and ideas to keep you and your Electron occupied for a whole month!

Take out a subscription and don't miss one single issue!

**YES
PLEASE!**

Tick as
required

3101 Send me the next 12 issues of *Let's Compute* for the special introductory price of £12 (including postage and packing).

3102 I'd also like to become a founder member of the *Let's Compute* Club for the special price of £3 (instead of the regular £5) - so please send me the bumper Club pack with my first issue.

3103 I'll order *Let's Compute* from my newsagent, but I'd still like to join the Club and receive my bumper members pack for £5.

I wish to pay by:

Cheque payable to Database Publications
 Credit card No: _____

Exp. date /

Name

Signed

Address

..... Post code

Daytime phone number in case of queries

TO: Database Direct, FREEPOST, Ellesmere Port, South Wirral L65 3EB

No stamp need be posted in UK

If you're joining the Club, state whether you'd like to receive your free software on disc or tape.

PHONE ORDERS:
051-357 1275

that's
for

(and all the
other Acorn
computers)

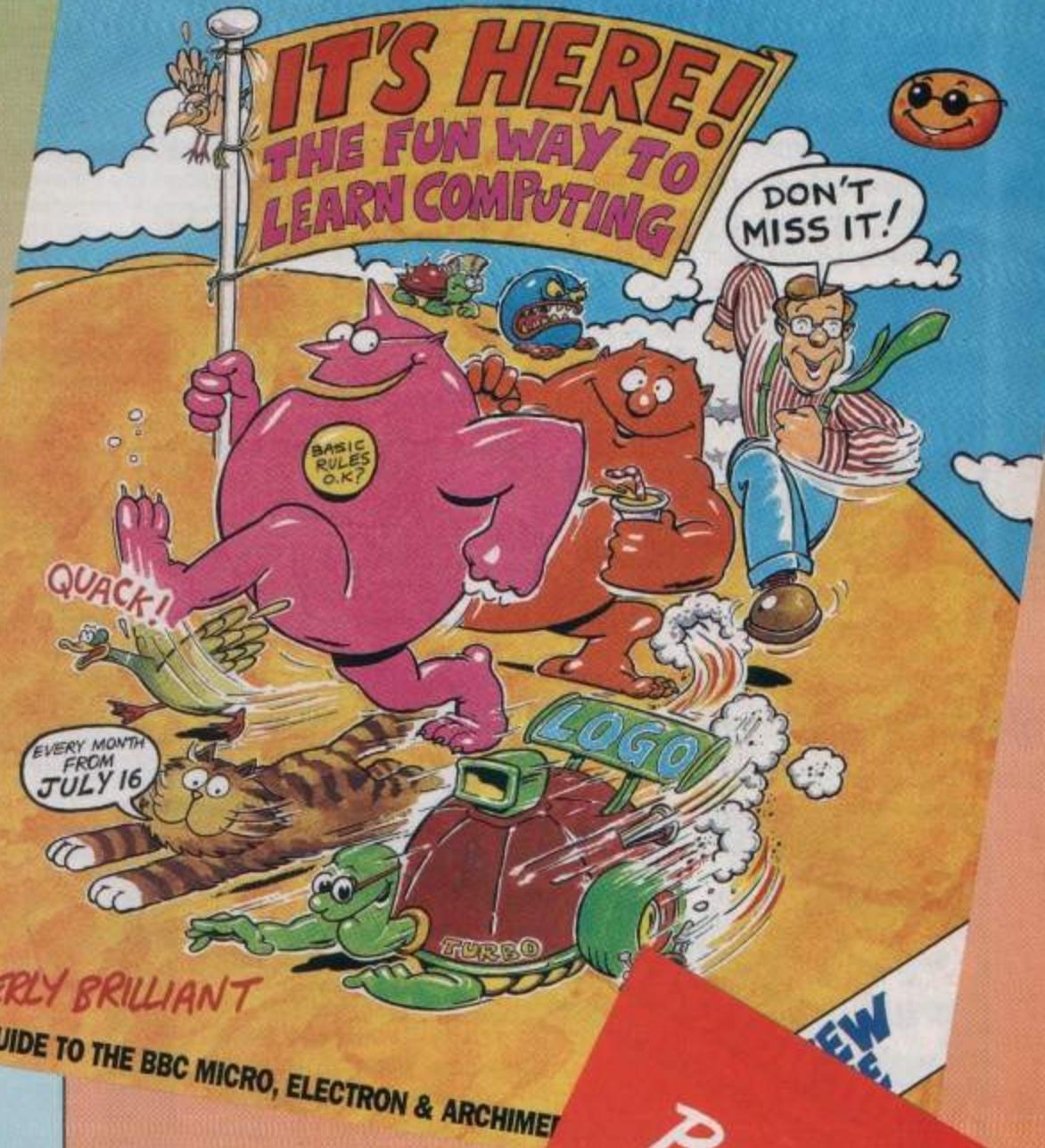
LOOK!

Here's a
bumper
pack of
goodies
for everyone!

Every new member of the *Let's Compute!* Club receives a giant package of gifts to help you make the most of your computer. In addition to your Gold Membership Card you'll also receive lots of software on disc or tape, plus a crib cube, unique function key guide, notepad, hat, badge, stickers, money-saving vouchers, and much, much more.

It costs only £5 to join, but if you subscribe to *Let's Compute!* on the form alongside you can also become a founder member, with all the same privileges, for just £3!

LET'S COMPUTE!



UTTERLY BRILLIANT
THE ¹ GUIDE TO THE BBC MICRO, ELECTRON & ARCHIMEDE

Become
a founder
member
NOW!

LET'S
COMPUTE!
CLUB

ELECTRON SPARES

Twin Rom Cartridge Holders	£9.95	P&P +£1
Acorn Data Recorders	£24.99	+£2
Electron Mains Power Unit.....	£9.95	+£1
Loudspeakers (complete)	£1.50	—
Internal Powerboard.....	£7.50	+£1
TV Modulator	£7.50	—
C12 Blank Tapes (Pack of 5)	£2	—
Complete Keyboard Assembly (inc keytops).....	£12.99	+£1.50
Keyboard Key Switches (Pack of 5).....	£1.99	—
Keytops (complete set)	£4.99	—
Cases (Top & Bottom Complete)	£7.50	+£1.50
Joysticks (15 pin type)	£6.95	+£1

**MAIN COMPUTER
BOARD**
£47.50 + £2 P + P

TWO NEW TITLES FROM SUPERIOR

Play It Again Sam 13
Hostages
£7.95 each

ELECTRON SOFTWARE AVAILABLE
SEND SAE FOR CATALOGUE

EX-DEMO/REFURBISHED

ELECTRON COMPUTERS

Complete with free
software pack
£79.95 + £3 p&p

PLUS ONE
(Joystick/
Printer Interface)
£35 + £2 p&p

All above products are fully tested and carry
a 90 day warranty

COMPUTER CABLES

BEM 01 Cassette lead (7Din/Jack)	£4.99
BEM 02 TV/Computer aerial lead	£3.99
BEM 03 Printer lead (Parallel) 1m.....	£8.99
BEM 04 Printer lead (Parallel) 2m	£9.99
BEM 05 Cassette lead - Acorn (7 Din/7 Din)	£4.99
BEM 06 M/VITEC Monitor lead (6 Din/6 Din)	£4.99
BEM 07 TV/Computer aerial lead (6 Din/SCART)	£7.99
BEM 08 Computer /Monitor (Ferguson 6 Din/7 Din)	£4.99
BEM 09 Computer /Monitor (Hitachi 6 Din/7 Din)	£4.99
BEM 10 Computer /Monitor (Philips 6 Din/7 Din)	£4.99

We have cables for all makes of computers
— phone for details and prices

GRACAR

Unit 7 Acacia Close
Cherry Court Way Ind. Est
Leighton Buzzard
Beds LU7 8QE
Tel: 0525 383074



electron user MAIL ORDER OFFERS electron user MAIL ORDER OFFERS

**Save
on batteries!**

For your personal stereo, radio or TV

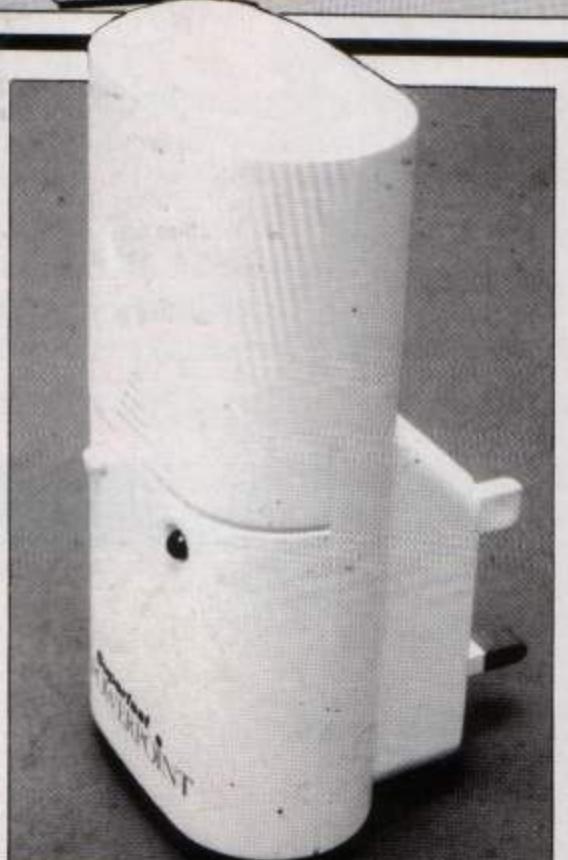
You know
how expensive
it is to replace your
batteries when they run
down. Even with rechargeable
batteries you still have to wait 14 hours
for a full charge.

We have solved the problem with the unique
superfast powerful battery and charger kit.

This amazing device will completely charge four standard
AA size rechargeable batteries in under 2 hours and each
battery can be recharged at least 1,000 times.

Further, for a limited period we can sell the charger and
four rechargeable batteries at the staggeringly low cost of
£19.95 (plus £1 p&p).

It will pay for itself within weeks



TO ORDER PLEASE USE THE FORM ON PAGE 45

Banish those VDU blues!

ALTHOUGH modern dot matrix printers are extremely versatile, access to their many features is not easy. However, using the routine here – Easy Printer – you can easily send the complex sequence of VDU codes needed to produce the various styles.

It will also stop you making mistakes which would make your printer do something that was never intended.

The program is a menu driven Basic utility which allows the setting of up to 26 Epson compatible printer control codes and shows at a glance the options that have been set.

As well as allowing you to set all the usual options such as NLQ, compressed, emphasised, enlarged and so on you can also set things like form length, left and right margins and international character sets.

It is very easy to set your printer up for use with programs like View and Viewsheet, and a printer driver may only be needed for localised effects such as italics or underlining.

The program will produce a sample printout, giving a preview of the effects you have set – useful for testing or comparing different types of printers.

Type in the program listing and save it under an appropriate filename. You should add REMs to the start of lines 70 and 80 until the program is working correctly but once you're sure it's right you must remove them or the program will not work as intended.

When run, you will first be asked for information about your printer. This enables the correct setting of the line feed option and the default right hand margin for either a normal or wide carriage printer. When this is

Leslie Goodridge offers a routine designed to set up your printer automatically

done the menu screen will be displayed listing the various options.

Initially these will be set to their default values which are either indicated in brackets or shown as a value against each option. The assumed values are shown in the panel.

If these values are only marginally different from your printer settings, it is probably not worth altering the DIP switches, since switching the control code options on and off again will reset them anyway.

To set up any combination of the displayed options, press any of the keys A to Z. For example, pressing C followed by G will

set the printer up to produce condensed italic characters.

When an option is set, an asterisk will appear beside it as a reminder. To reset the option press the key again and the asterisk will disappear showing the default setting has been reinstated.

Pressing f1 will reset all options to their default values – a very useful feature when a large number of options need resetting.

When changing form length and line spacing you will be prompted to enter an appropriate value when necessary.

If you select options B, C, D, N or O the number of characters which can be printed on a line will vary, a fact reflected in the value displayed for the right hand margin. Changing from pica to elite, for example, will cause the right hand margin value to change from 80 to 96.

Setting options U or V will fix the physical positions of the margins when printing. The number of printable characters between the them, however, still depends on the character pitch and the margin values displayed on screen will reflect any changes.

You may occasionally see slight differences in these values if you change character pitch a number of times. This is because they are displayed on screen as whole numbers, even though the actual values may be fractions of a character space.

The program also controls the interaction between the left and right hand margins to prevent them going out of range, and you may see an occasional error message to

Initial settings

- Draft
- Pica characters
- U.S. character set
- Paper out enabled
- No skip over perforations
- Form length: 66 lines or 11 in
- Line spacing: 36/216 in (equivalent to the normal 1/6 in)

This is Draft Pica US Chrs on the Panasonic KX-P1080 with descenders gjpqy and line spacing 36/216 in.

This is NLQ Pica Condensed Italics US Chrs on the Panasonic KX-P1080 with descenders gjpqy and line spacing 36/216 in.

This is NLQ Pica Emphasized Proportional US Chrs on the Panasonic KX-P1080 with descenders gjpqy and line spacing 36/216 in.

This is Draft Elite Enlarged Emphasized Proportional US Chrs on the Panasonic KX-P1080 with descenders gjpqy and line spacing 36/216 in.

This is Draft Elite Enlarged Proportional Underlined US Chrs on the Panasonic KX-P1080 with descenders gjpqy and line spacing 36/216 in.

warn you if there is a possibility of this happening.

Some control code combinations cancel or override each other. Character pitch, for example, has priority over some other character modes.

To avoid such problems the program prevents the selection of certain combinations. You cannot, for example, select superscript and subscript together, or select condensed, enlarged or elite if character pitch has already been set with options O or N.

Once you have set your options, you have

the choice of pressing function key F9 to exit from the program or pressing F5 to obtain a sample printout.

If you select the latter you will be prompted to enter the name of the printer, or to change the name if one has been entered already. Once this is done you will get a printout using the options previously selected.

This lists the options together with the actual effect and the printer name, thus giving you a complete record. When the printout is completed control passes back to the menu.

If you press F9 to exit from the program

you will see a short exit menu, allowing you to return to Basic or alternatively enter View or Viewsheet.

Pressing Break at any time will clear all variables and run the program again from the start. This allows you, for example, to reconfigure the the program for a different printer with a different size of carriage.

Easy Printer will prove to be a very useful utility which will help you to control many of your printer's facilities. In fact it may even help you to discover some you did not know it had, or that you could not be bothered to use because of the hassle of entering all those VDU codes.

```
10 REM Easy Printer
20 REM by Leslie J Goodridge
30 REM (c) Electron User
40 :
50 ON ERROR GOTO 3960
60 REM Until de-bugged add REMs to
the next two lines
70 *KEY10 OLD|M RUN|M
80 *FX229,1
90 :
100 MODE6:CLS
110 VDU19,1,6,0;
120 VDU23,1,0,0,0,0;
130 PROCcheck_printer
140 CLEAR
150 PROCsetup
160 PROCscren
170 exit=FALSE:reset=FALSE
180 REPEAT
190 PROCcrlar_window
200 PROCmenu_choice
210 UNTIL exit OR reset
220 IF reset GOTO 140
230 CLS:VDU20
240 PRINTTAB(5,10)"Exit to :"
250 PRINTTAB(14,12)"1...BASIC"
260 PRINTTAB(14,13)"2...VIEW"
270 PRINTTAB(14,14)"3...VIEWSHEET"
280 REPEAT
290 *FX21,0
300 exit$=GET$
310 exit%=INSTR("123",exit$)
320 UNTIL exit%
330 PROCtidy:CLS
340 ON exit% GOTO 350,360,370
350 OSCLI("basic"):END
360 OSCLI("word"):END
370 OSCLI("sheet"):END
380 :
390 DEF PROCsetup
400 VDU2,1,27,1,64,3:REM Reset Print
er
410 *FX11,0
420 *FX4,1
430 *FX225,128
440 wide=?&70/10:IF wide=0 wide=1
450 lm%0:rm%=INT(80*wide+0.5):rmax%
=rmax%:limit%2:present=rmax%
460 alpha$="ABCDEFGHIJKLMNPQRSTUVWXYZ"
Y2"
470 valid$=alpha$+CHR$129+CHR$133+CHR$137
480 numeric=1:string=0
490 printer$=STRING$(25," ")
500 final$=printer$:change$=printer$
510 delete$=CHR$127+" "+CHR$8
520 clear$=STRING$(3," ")+STRING$(3,
CHR$8)
530 DIM selection$(26),on_off%(26),d
efault%(9),alt%(3),country$(19),cpi$(3
```

```
) 540 ENVELOPE1,1,13,2,1,1,1,2,126,0,0
,-126,126,126
550 RESTORE 4000
560 FOR I%1 TO 26
570 READ selection$(I%)
580 on_off%(I%)=0
590 NEXT
600 RESTORE 4090
610 FOR I%1 TO 8
620 READ default%(I%)
630 NEXT
640 default%(9)=rm%
650 FOR I%1 TO 3
660 alt%(I%)=0
670 NEXT
680 alt%(0)=36
690 RESTORE 4110
700 FOR I%0 TO 19
710 READ country$(I%)
720 NEXT
730 RESTORE 4170
740 FOR I%0 TO 3
750 READ cpi$(I%)
760 NEXT
770 ENDPROC
780 :
790 DEF PROCcheck_printer
800 ?&70=0:IF FNyn("Wide Carriage Pr
inter Y/N?",7,12) ?&70=17
810 yes=FNyn("Is Printer set for aut
o linefeed Y/N?",1,12)
820 IF yes OSCLI("fx6,10") ELSE OSCL
I("fx6,0")
830 CLS
840 PRINTTAB(0,10)"Make sure your p
rinter is switched on"
850 PRINTTAB(0,12)"and on line or th
e program will hang up"
860 PRINTTAB(0,16)"Press any key whe
n ready"
870 OSCLI("fx21,0"):key=GET:ENDPROC
880 :
890 DEF PROCcrlar_window
900 VDU28,0,24,39,19,12,26
910 ENDPROC
920 :
930 DEF PROCscren
940 CLS
950 PRINTTAB(14,0)"EASY PRINTER"
960 PRINTTAB(14,1)----- -----
970 PRINTTAB(15,2)** Menu ***
980 FOR item%1 TO 26
990 letter$=CHR$(64+item%)
1000 IF item%14 col%1:row%3 ELSE c
ol%19:row%=-10
1010 PRINTTAB(col%,item%+row%);letter
$;".";selection$(item%)
1020 IF item%1 PRINT" (Draft)"
1030 IF item%2 PRINT" (Pica)"
```

THE 1990 ATARI ST PRODUCT GUIDE

PERIPHERALS & ACCESSORIES



FLOPPY DISK DRIVES



MONITORS



JOYSTICKS



SCANNERS



PRINTERS



DISK BOXES

ROBOTICS

PLUS MUCH MORE!
SEND FOR YOUR FREE PRODUCT GUIDE!

THE UK's GUIDE TO THE ATARI ST

AND
ITS **FREE!**

If you are interested in buying an Atari ST (or if you already own one), then you will not want to miss the FREE Atari ST Product Guide from Silica Shop. This 48 page, full colour guide is packed with details of peripherals, accessories, books and software for the Atari ST range of computers. In fact, the 1990 Atari ST Product Guide is the most comprehensive product handbook available for the Atari ST. Not only does the Product Guide provide an invaluable source of information on the UK's largest range of ST products, it is available absolutely FREE OF CHARGE! Just complete and return the coupon below for your FREE COPY! In addition to ALL Atari hardware, the range of products featured in the catalogue includes:

PERIPHERALS:

Robotics	Clocks	Floppy Disk Drives
Hard Disk Drives	Emulators	Graphic Tablets
MIDI/Music	Modems	Modulators
Monitors	Mouse controllers	Plotters
Printers	Scanners	Scientific Equip
Sound Digitisers	Sound Samplers	Video Enhancers

ACCESSORIES:

Cables	Cleaning Kits	Disks
Disk Boxes	Dust Covers	Joysticks
Monitor Access	Mouse Access	Power Supplies
Printer Labels	Printer Paper	Printer Ribbons
Stands	Upgrades	

BOOKS:

ST Dedicated 68000 Processor General Computing

SOFTWARE - ENTERTAINMENT:
Arcade Games Compilations Advanced Sims
Sport Sims Adventures Board & Strategy

SOFTWARE - PRODUCTIVITY:
Art & Graphics Accounts CAD
Communications Databases Desktop Publishing
Education/Childs Music Programming
Spreadsheets Utilities Word Processors

SOFTWARE & BOOKS



ARCADE GAMES



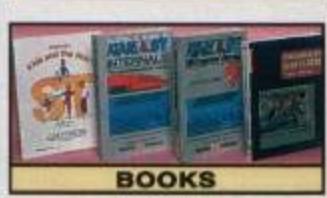
ART & GRAPHICS



EDUCATIONAL



MUSIC



BOOKS

& STILL MORE!
RETURN THE COUPON NOW!

**COMPLETE & RETURN
THE COUPON FOR YOUR**

FREE COPY

**OF THE 1990 ATARI ST
48 PAGE PRODUCT GUIDE
FROM SILICA SHOP - THE ATARI SPECIALISTS**

Silica are the UK's No 1 Atari Specialists. We have been established for over 12 years, and have an annual turnover of £10 million. With our experience and expertise, we can claim to meet our customers requirements with an understanding which is second to none. But don't just take our word for it. Complete and return the coupon for our latest free literature and begin to experience the "Silica Service".

**SILICA
SHOP**

MAIL ORDER:
Order Lines Open: Mon-Sat 9:00am-6:00pm
No Late Night Opening
Fax No: 081-309 0608

LONDON SHOP: 52 Tottenham Court Road, London, W1P 0BA
Opening Hours: Mon-Sat 9:00am-6:00pm
Late Night: Thursday until 8pm
Fax No: 071-323 4737

LONDON SHOP: Selfridges (1st Floor), Oxford Street, London, W1A 1AB
Opening Hours: Mon-Sat 9:00am-6:00pm
Late Night: Thursday until 8pm
Fax No: 071-495 5321

SIDCUP SHOP: 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX
Opening Hours: Mon-Sat 9:00am-5:30pm
Late Night: Friday until 7pm
Fax No: 081-302 8811

To: Silica Shop, Dept ELUSR-0790-37, 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX

PLEASE SEND ME A FREE ST PRODUCT GUIDE

Mr/Mrs/Ms: Initials: Surname:

Address:

Postcode: Tel:

Which computer(s), do you own?

E&OE - Advertised prices and specifications may change - please return the coupon for the latest information.

```

>

1440 IF IX=15 AND on_off%(IX) PRINT c
p$(alt%(IX-13))" ";
1450 IF IX=16 AND on_off%(IX) PRINT c
ountry$(alt%(IX-13))";- ":";PROCalphabet
1460 NEXT
1470 PRINT" in ":";PROCnormal_test
1480 ENDPROC
1490 :
1500 DEF PROCnormal_test
1510 both=on_off%(14) OR on_off%(15)
1520 FOR set%1 TO 12
1530 IF set%1 AND on_off%(set%) PRIN
T selection$(set%); " ;ELSE IF set%1
PRINT"Draft ";
1540 IF set%2 AND on_off%(set%) PRIN
T selection$(set%); " ;ELSE IF set%2
AND both PRINT";ELSE IF set%2 AND NO
T both PRINT"Pica ";
1550 IF set%12 AND on_off%(set%) PRI
NT selection$(set%); " ;ELSE IF set%1
2 AND on_off%(16)=0 PRINT"US Chrs ";EL
SE IF set%12 AND on_off%(16)=1 PRINT"C
hrs ";
1560 IF set%2 AND set%12 AND on_off
%(set%) PRINT selection$(set%); " ;
1570 NEXT
1580 ENDPROC
1590 :
1600 DEF PROCalphabet
1610 FOR IX=33 TO 126
1620 PRINT CHR$(IX);
1630 NEXT
1640 PRINT" ";
1650 ENDPROC
1660 :
1670 DEF PROCchange_printer
1680 PROCclear_window
1690 IF NOT FNyn("Change Printer Y/N?
",10,20) ENDPROC ELSE PROCget_printer
1700 ENDPROC
1710 :
1720 DEF PROCget_printer
1730 PROCclear_window
1740 PRINTTAB(12,23)"Escape to abort
1750 PRINTTAB(0,20)"Printer name: ";
1760 escape=FALSE
1770 changes$=FNget_input(25,string)
1780 IF escape ENDPROC ELSE printer$=
changes
1790 ENDPROC
1800 :
1810 DEF PROCset_exit
1820 PROCclear_window
1830 exit=FNyn("Exit Y/N?",15,20)
1840 ENDPROC
1850 :
1860 DEF PROCchange(choice%)
1870 PROCcheck_clash:IF clash PROCcle
ar_window:VDU7:PRINTTAB(10,21)"!Contro
l Code Clash!":PROCwait(150):ENDPROC
1880 on_off%(choice%)=on_off%(choice%
)EOR1
1890 IF on_off%(choice%) PROCchange_o
n(choice%) ELSE PROCchange_off(choice%
)
1900 ENDPROC
1910 :
1920 DEF FNyn(message$,col,row)
1930 PRINT TAB(col,row)message$
1940 REPEAT
1950 *FX21,0
1960 ans$=CHR$(GET AND &DF)
1970 UNTIL INSTR("YN",ans$)
1980 IF ans$="Y"=TRUE ELSE=FALSE
1990 :
2000 DEF FNget_input(len%,type)
2010 IF type=numeric first=48:last=57
ELSE first=32:last=126
2020 start$=STRING$(len%,".")+STRING$(
len%,CHR$8)
2030 final$=""
2040 VDU23,1,1;0;0;0;
2050 PRINT start$;
2060 REPEAT
2070 *FX21,0
2080 input$=GET$:input=ASC(input$)
2090 IF input$=CHR$27 escape=TRUE:GOTO
2100
2100 IF input$=CHR$13 AND final$<> ""
GOTO2150
2110 IF input$=CHR$127 AND LEN(final$)
>0 final$=LEFT$(final$,LEN(final$)-1)
:PRINT delete$;:GOTO2070
2120 IF input<first OR input>last OR
LEN(final$)=len% VDU7:GOTO2070
2130 PRINT input$;
2140 final$=final$+input$;
2150 UNTIL input$=CHR$13 OR escape
2160 VDU23,1,0;0;0;0;
2170 =final$;
2180 :
2190 DEF PROCmode
2200 PRINT"";
2210 IF alt%(1) AND 1 PRINT selection
$(2)" ;ELSE PRINT"Pica ";
2220 IF alt%(1) AND 4 PRINT selection
$(3)" ";
2230 IF alt%(1) AND 32 PRINT selection
$(4)" ";
2240 IF alt%(1) AND 8 PRINT selection
$(5)" ";
2250 IF alt%(1) AND 16 PRINT selection
$(6)" ";
2260 PRINT" )";
2270 ENDPROC
2280 :
2290 DEF PROCchange_off(choice%)
2300 ON choice% GOTO2310,2320,2330,23
40,2350,2360,2370,2380,2390,2400,2410,
2420,2430,2440,2450,2460,2470,2480,249
0,2500,2510,2520,2530,2540,2550,2560
2310 VDU2,1,27,1,120,1,0,3:GOT02570
2320 VDU2,1,27,1,80,3:GOT02570
2330 VDU2,1,18,3:GOT02570
2340 VDU2,1,27,1,87,1,0,3:GOT02570
2350 VDU2,1,27,1,70,3:GOT02570
2360 VDU2,1,27,1,72,3:GOT02570
2370 VDU2,1,27,1,53,3:GOT02570
2380 VDU2,1,27,1,84,3:GOT02570
2390 VDU2,1,27,1,84,3:GOT02570
2400 VDU2,1,27,1,112,1,0,3:GOT02570
2410 VDU2,1,27,1,45,1,0,3:GOT02570
2420 VDU2,1,27,1,82,1,0,3:GOT02570
2430 VDU2,1,27,1,57,3:BS="on ":GOT025
70
2440 VDU2,1,27,1,33,1,0,3:GOT02570
2450 VDU2,1,27,1,119,1,0,3:GOT02570
2460 VDU2,1,27,1,82,1,0,3:GOT02570
2470 VDU2,1,27,1,67,1,0,1,11,3:GOT025
70
2480 VDU2,1,27,1,67,1,66,3:GOT02570
2490 VDU2,1,27,1,79,3:GOT02570
2500 VDU2,1,27,1,51,1,36,3:GOT02570
2510 VDU2,1,27,1,108,1,0,3:GOT02570
2520 VDU2,1,27,1,81,1,default%(9),3:G
0T02570
2530 VDU2,1,27,1,97,1,0,3:GOT02570
2540 VDU2,1,27,1,97,1,0,3:GOT02570
2550 VDU2,1,27,1,115,1,0,3:GOT02570
2570 IF choice%<14 OR choice%>22 val%
=0 ELSE val%=default%(choice%-13)
2580 PROCprint(choice%,val%, " ")
2590 ENDPROC
2600 :
2610 DEFPROCprint(choice%,val%,C$)
2620 IF choice%<14 row%3 ELSE row%=
10
2630 IF choice%>13 PRINTTAB(18,choice
%+row%)C$ ELSE PRINTTAB(0,choice%+row%
)C$;
2640 IF choice%>13 AND choice%<23 PRI
NTTAB(36,choice%+row%)clear$;val%
2650 IF choice%>13 PRINTTAB(13,16)BS
2660 IF choice%>20 alt%(0)=val%
2670 IF choice%>21 lm%>val%
2680 IF choice%>22 rm%>val%
2690 SOUND1,1,178,5
2700 ENDPROC
2710 :
2720 DEFPROCchange_on(choice%)
2730 escape=FALSE
2740 IF choice%>13 AND choice%<23 PRO
Cget_value(choice%)
2750 IF escape on_off%(choice%)=0:END
PROC
2760 IF choice%>13 AND choice%<17 alt
%(choice%-13)=value%
2770 ON choice% GOTO2780,2790,2800,28
10,2820,2830,2840,2850,2860,2870,2880,
2890,2900,2910,2920,2930,2940,2950,296
0,2970,2980,2990,3000,3010,3020,3030
2780 VDU2,1,27,1,120,1,1,3:GOT03040
2790 VDU2,1,27,1,77,3:GOT03040
2800 VDU2,1,27,1,15,3:GOT03040
2810 VDU2,1,27,1,87,1,1,3:GOT03040
2820 VDU2,1,27,1,69,3:GOT03040
2830 VDU2,1,27,1,71,3:GOT03040
2840 VDU2,1,27,1,52,3:GOT03040
2850 VDU2,1,27,1,83,1,0,3:GOT03040
2860 VDU2,1,27,1,83,1,1,3:GOT03040
2870 VDU2,1,27,1,112,1,1,3:GOT03040
2880 VDU2,1,27,1,45,1,1,3:GOT03040
2890 VDU2,1,27,1,82,1,3,3:GOT03040
2900 VDU2,1,27,1,56,3:BS="off":GOT030
40
2910 VDU2,1,27,1,33,1,value%,3:GOT030

```

This is Draft Elite Italics Superscript Proportional US Chrs on the Panasonic KX-P1080 with descenders gjpqy and line spacing 36/216 in.

This is Draft Elite Condensed Italics US Chrs on the Panasonic KX-P1080 with descenders gjpqy and line spacing 36/216 in.

This is Int char set 5 (Swedish I):- !#BX&' ()*+,.-./0123456789:;<=>?@ABCDEFGHIJKLMNPQRSTUVWXYZ& in Draft Elite Condensed Dble Strike Chrs on the Panasonic KX-P1080 with descenders gjpqy and line spacing 36/216 in.

This is Int char set 2 (German):- !#BX&' ()*+,.-./0123456789:;<=>?@ABCDEFGHIJKLMN OPQRSTUVWXYZ& in Draft Pica Chrs on the Panasonic KX-P1080 with descenders gjpqy and line spacing 36/216 in.

```

40
2920 VDU2,1,27,1,119,1,value%,3:GOT03
040
2930 VDU2,1,27,1,82,1,value%,3:GOT030
40
2940 VDU2,1,27,1,67,1,0,1,value%,3:60
T03040
2950 VDU2,1,27,1,67,1,value%,3:GOT030
40
2960 VDU2,1,27,1,78,1,value%,3:GOT030
40
2970 VDU2,1,27,1,51,1,value%,3:GOT030
40
2980 VDU2,1,27,1,108,1,value%,3:GOT03
040
2990 VDU2,1,27,1,81,1,value%,3:GOT030
40
3000 VDU2,1,27,1,97,1,3,3:GOT03040
3010 VDU2,1,27,1,97,1,1,3:GOT03040
3020 VDU2,1,27,1,97,1,2,3:GOT03040
3030 VDU2,1,27,1,115,1,1,3:GOT03040
3040 IF choice%<14 OR choice%>22 value%<0
3050 PROCprint(choice%,value%,"")
3060 ENDPROC
3070 :
3080 DEF PROCget_value(choice%)
3090 PROCclear_window
3100 min%:0:max%:255:len%:3
3110 IF choice%:14 max%:63:len%:2
3120 IF choice%:15 max%:3:len%:1
3130 IF choice%:16 max%:19:len%:2
3140 IF choice%:17 max%:22:min%:1:len%:2
3150 IF choice%:18 max%:127:min%:1
3160 IF choice%:19 max%:127
3170 IF choice%:20 min%:1
3180 IF choice%:21 max%:rmax%-limit%:IF max%<=min% PROCno_change("Left"):ENDPROC
3190 IF choice%:22 max%:rmax%:min%:lm%+limit%:IF min%>=max% PROCno_change("Right"):ENDPROC
3200 PRINTTAB(12,23)"Escape to abort"
3210 REPEAT
3220 PRINTTAB(7,20)"Enter a value (";
min%;"-";max%;")";
3230 escape=FALSE:correct_val=FALSE
3240 value%:VAL(FNget_input(len%,numeric))
3250 IF escape GOT03290
3260 IF choice%:21 AND value%:0 AND len%:0 VDU7:PRINTTAB(7,20)"Zero value already set!":PROCwait(200):GOT03290
3270 IF value%>=min1 AND value%<=max1 correct_val=TRUE
3280 IF NOT correct_val VDU7
3290 UNTIL correct_val OR escape
3300 ENDPROC
3310 :
3320 DEF PROCcheck_clash
3330 IF choice%:"N" AND(on_off%:2) OR on_off%:3) OR on_off%:4) OR on_off%:5) OR on_off%:6) OR on_off%:15)) GOT03420
20
3340 IF choice%>1 AND choice%<7 AND on_off%:14) GOT03420
3350 IF choice%:"0" AND(on_off%:2) OR on_off%:3) OR on_off%:4) OR on_off%:14)) GOT03420
3360 IF choice%>1 AND choice%<5 AND on_off%:15) GOT03420
3370 IF choice%:"P" AND on_off%:12) OR choice%:"L" AND on_off%:16) GOT03420
3380 IF choice%:"Q" AND on_off%:18) OR choice%:"R" AND on_off%:17) GOT03420
3390 IF choice%:"W" AND on_off%:24) OR on_off%:25) OR choice%:"X" AND(on_off%:23) OR on_off%:25) OR choice%:"Y" AND(on_off%:23) OR on_off%:24)) GOT03420
3400 IF choice%:"H" AND on_off%:9) OR choice%:"I" AND on_off%:8) GOT03420
3410 ENDPROC
3420 clash=TRUE:ENDPROC
3430 :
3440 DEF PROCno_change(A$)
3450 PRINTTAB(9-LEN(A$),21)A$" margin cannot be changed"
3460 PRINTTAB(7,23)"!max & min values equal"
3470 VDU7:PROCwait(300):escape=TRUE
3480 ENDPROC
3490 :
3500 DEF PROCwait(delay)
3510 REPEAT UNTIL INKEY(delay)
3520 ENDPROC
3530 :
3540 DEF PROCMargin
3550 elite:on_off%:2):condensed:on_of
fx%:enlarged:on_off%:4)
3560 alternate%:on_off%:14) OR on_off%:15)
3570 IF alternate% GOT03670
3580 IF NOT(elite OR condensed OR enlarged)result%:0
3590 IF elite AND NOT(condensed OR enlarged)result%:1
3600 IF condensed AND NOT(elite OR enlarged)result%:4
3610 IF condensed AND elite AND NOT enlarged result%:5
3620 IF enlarged AND NOT(elite OR condensed)result%:32
3630 IF enlarged AND elite AND NOT condensed result%:33
3640 IF enlarged AND condensed AND NOT elite result%:36
3650 IF enlarged AND condensed AND elite result%:37
3660 GOT03680
3670 IF on_off%:14) result%:alt%:1) AND &25 ELSE result%:alt%:2)
3680 IF result%:0 rmax%:INT(80*wide+0.5):limit%:2
3690 IF result%:1 rmax%:INT(96*wide+0.5):limit%:3
3700 IF result%:2 rmax%:INT(120*wide+0.5):limit%:4
3710 IF result%:3 OR result%:4 rmax%:INT(137*wide+0.5):limit%:4
3720 IF result%:5 rmax%:INT(160*wide+0.5):limit%:4
3730 IF result%:32 rmax%:INT(40*wide+0.5):limit%:1
3740 IF result%:33 rmax%:INT(48*wide+0.5):limit%:1
3750 IF result%:36 rmax%:INT(68*wide+0.5):limit%:2
3760 IF result%:37 rmax%:INT(80*wide+0.5):limit%:2
3770 IF rmax%:137 default%:9):132 ELSE IF rmax%:68 AND wide%:1 default%:9):6 ELSE default%:9):rmax
3780 new=default%:9
3790 IF on_off%:21 lm%:INT(lm%*(new/present)+0.5)
3800 IF on_off%:22 rm%:INT(rm%*(new/present)+0.5) ELSE rm%:default%:9
3810 IF rm%>rmax% rm%:rmax%
3820 IF lm%>=rm% lm%:rm%-limit%
3830 PRINTTAB(36,12)clear$;rm%
3840 PRINTTAB(36,11)clear$;lm%
3850 present=new
3860 ENDPROC
3870 :
3880 DEF PROCTidy
3890 *FX12,0
3900 *FX4,0
3910 *FX229,0
3920 *FX225,1
3930 VDU23,1,1;0;0;0;
3940 ENDPROC
3950 :
3960 PROCTidy
3970 REPORT:PRINT" at line ";ERL
3980 END
3990 :
4000 DATA NLQ,Elite,Condensed,Emphasized,Enlarged,Subscript,Superscript,Proportional,Underlined,UKChrs
4010 DATA Dble Strike,Italics,Superscript,Subscript
4020 DATA Proportional,Underlined,UKChrs
4030 DATA Paper OUT on,Print mode,Char pitch
4040 DATA Int char set,Form length in,Form length ln
4050 DATA Skip over perf,Line spc n/2,16,LH margin chrs
4060 DATA RH margin chrs,Auto justify,Auto centre
4070 DATA RH align,Half speed
4080 :
4090 DATA 0,0,0,11,66,0,36,0
4100 :
4110 DATA (USA),(French),(German),(English),(Danish I)
4120 DATA (Swedish I),(Italian),(Spanish I),(Japanese)
4130 DATA (Norwegian),(Danish II),(Spanish II),(Latin American)
4140 DATA (French Canadian),(Dutch),(Swedish II)
4150 DATA (Swedish III),(Turkish),(Swiss I),(Swiss II)
4160 :
4170 DATA (10 cpi),(12 cpi),(15 cpi),(17 cpi)

```

This is Print mode 3 (Elite) Int char set 5 (Swedish I):- !"#\$%&'()*+,-./0123456789;:<=>?@ABCDE
FGHIJKLMNOPRSTUVWXYZÄÖÄÜ ääbcdefghijklmnopqrstuvwxyzäöäü in NLQ Proportional Underlined Chrs on the Panasonic KX-P1080 with descenders gjpqy and line spacing 36/216 in.

This is Int char set 5 (Swedish I):- !"#\$%&'()*+,-./0123456789;:<=>?@ABCDEFGHIJKLMNOPRSTUVWXYZÄÖÄÜ ääbcdefghijklmnopqrstuvwxyzäöäü in NLQ Pica Emphasized Dble Strike Proportional Underlined Chrs on the Panasonic KX-P1080 with descenders gjpqy and line spacing 36/216 in.

This is Draft Pica US Chrs on the Panasonic KX-P1080 with descenders gjpqy and line spacing 36/216 in.

Write your own arcade smashes using the

ARCADE GAME *Creator*

Arcade Game Creator is a suite of programs for the Electron and BBC Micros. Taken from the pages of *Electron User*, it lets you into the secrets of writing fast-action arcade games, and provides you with a number of utilities to make design and programming easier.

Among the programs are:

- A Mode 5 sprite editor that lets you design your own multi-coloured characters.
- A selection of fast print routines that will move sprites both in front or behind other objects on the screen.
- Map generators that will squeeze a Mode 5 screen into 8 bytes!
- Scrolling maps.
- Score update and printing routines.
- ... and much, much more.

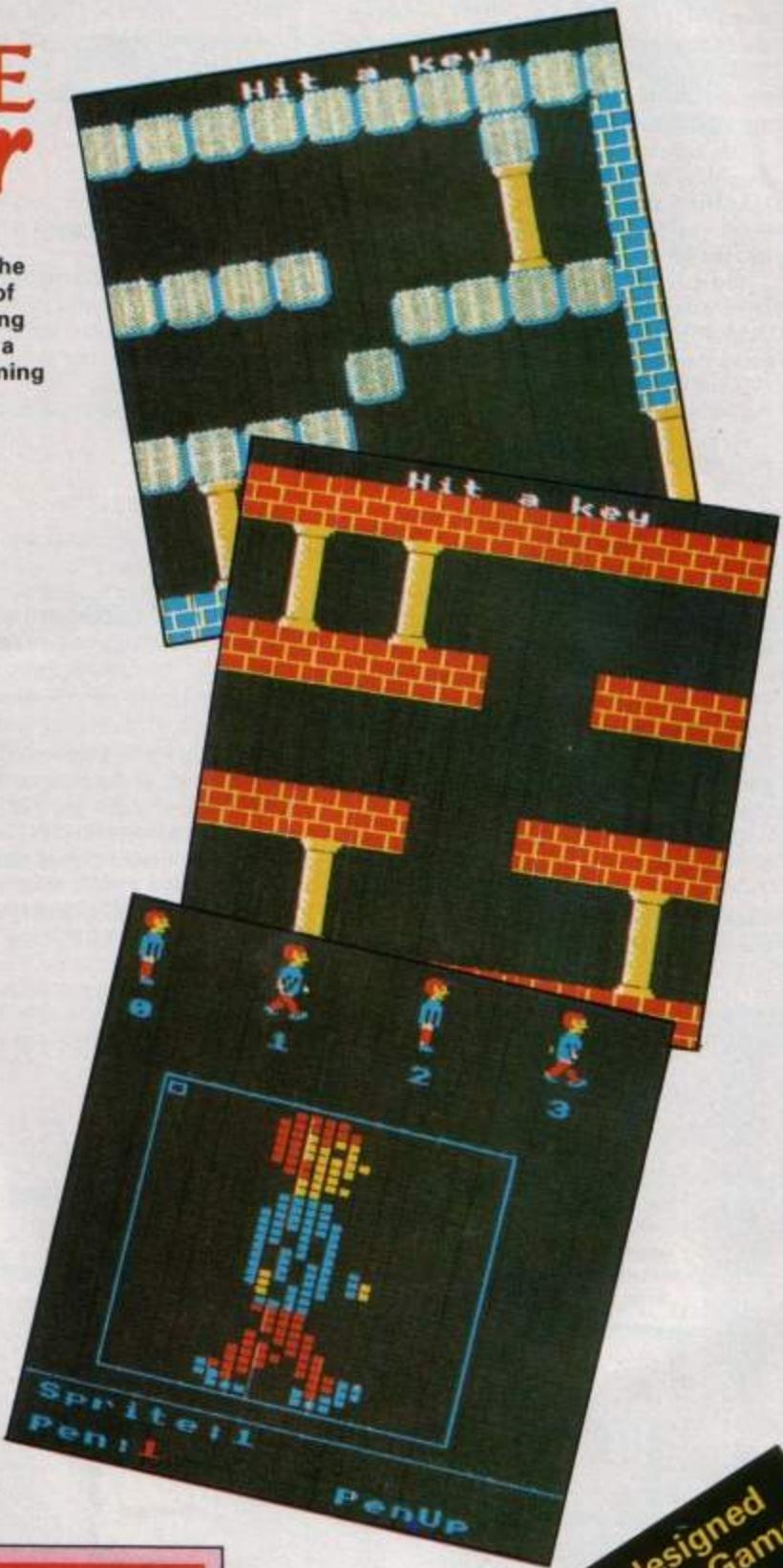
To help you make the most of the Arcade Game Creator, you will also get a comprehensive manual based on the original series.

Written in an easy to read style and with many illustrations and screen shots, it contains all the information you need to create and animate sprites, to design backgrounds and to link the two together into a complete arcade game.

If you are an aspiring games programmer, this is an offer you simply cannot afford to miss!

Arcade Game Creator

Tape + manual	£9.95
Disc + manual	£11.95



Screens designed
using Arcade Game
Creator

Place your order today, using the form on Page 45

Price: £9.95 (tape) £11.95 (disc)
 Supplier: Audiogenic, Winchester House,
 Canning Road, Wealdstone, Harrow HA3
 7SJ.
 Tel: 081-861 1166

IN these days of ever increasing sophistication it is most refreshing to play a game as simple yet addictive as Audiogenic's *Helter Skelter*.

The storyline goes like this: The world has been overrun by herds of comical looking monsters and your mission is to bounce the little blighters into oblivion. I choose the word bounce specifically, since you are a red rubber sphere of considerable size.

Ball control is achieved by means of three keys – left, right and bounce and your mastery of the bounce button will determine the outcome of the game.

Oddly enough the world that you are defending is constructed in platform game fashion – single screens, with several platforms floating in mid-air. Each is inhabited by one or more randomly moving monsters just waiting to be bounced.

Being an ace tactician, my first inclination was to ricochet around the screen as fast as possible, obliterating everything that I touched.

After I had doubled the indigenous monster population in five seconds I decided to adopt a more subtle approach – so I sat down and read the instructions.

The accompanying script indicated that the programmers had anticipated my

sledgehammer approach by specifying the order in which the monsters must be despatched.

On all occasions, the next one to be blatted is highlighted by a large white arrow hovering above its head. Contact with any other beast induces instant binary fission, the result being two furry fiends scurrying around the screen instead of one.

Don't be put off by the fact that you can literally sprint through the first few screens, as this is a deliberate ploy to boost your confidence. Things soon begin to increase in both complexity and difficulty – don't forget that you have a total of 74 levels to complete before you reach the end!

Helter Skelter's monsters are not in any way harmful to the bouncing ball and the game's controlling factor is time.

A digital clock counts down the seconds as you race to obliterate the monster masses. Tension is heightened by a rapid ticking sound that starts at the 10 seconds marker.

Scoring is relatively simple. You receive 500 points for every monster you zap, a further 1,000 bonus for every second that remains on the clock, and a final skill bonus which is halved every time you press the bounce button.

This final bonus encourages a player to adopt the most economical approach to completing a screen – this is also probably the quickest.

Variety is introduced by means of various tokens that appear at random throughout

electron
user

Golden
game

the game. Time limit permitting, you may be able to collect the letters E-X-T-R-A and be rewarded with an additional ball.

Alternatively there is a range of symbol tokens that can temporarily paralyse the monsters, interrupt the passage of time, or best of all, teleport you to the next level.

Sound is used sparingly: There is no title tune and the spot effects are simple, but this doesn't really detract from the game's appeal.

Considering the now ageing Electron's capabilities, *Helter Skelter* strikes a good balance between graphic detail and colour use. On the animation front, the characters exhibit flicker-free and fluid movement, with the realistic response of the ball to the apparent gravitational effects being worthy of note.

If you become bored with playing your way through the same old levels time after time and you're not good enough to get any further, try pressing E while you're on the title screen.

Once the discrete message Edit mode has disappeared you will be faced with a blank screen – a canvas upon which you can express the more devious side of your personality.

This built-in level designer allows you to create an infinite number of new screens, provided that you save them to disc or tape in groups of 40.

You are given total control over the size and location of all platforms, the number of monsters present, the starting position of your ball, the time allocation and the size of the low bounce bonus.

The only failing of this otherwise powerful editor is that you cannot edit a screen once you have committed it to memory. If you've used game editors in the past you will realise the magnitude of this omission.

There is no way that you will ever create a well balanced level at the first attempt – it will always be too easy, too difficult or just downright impossible!

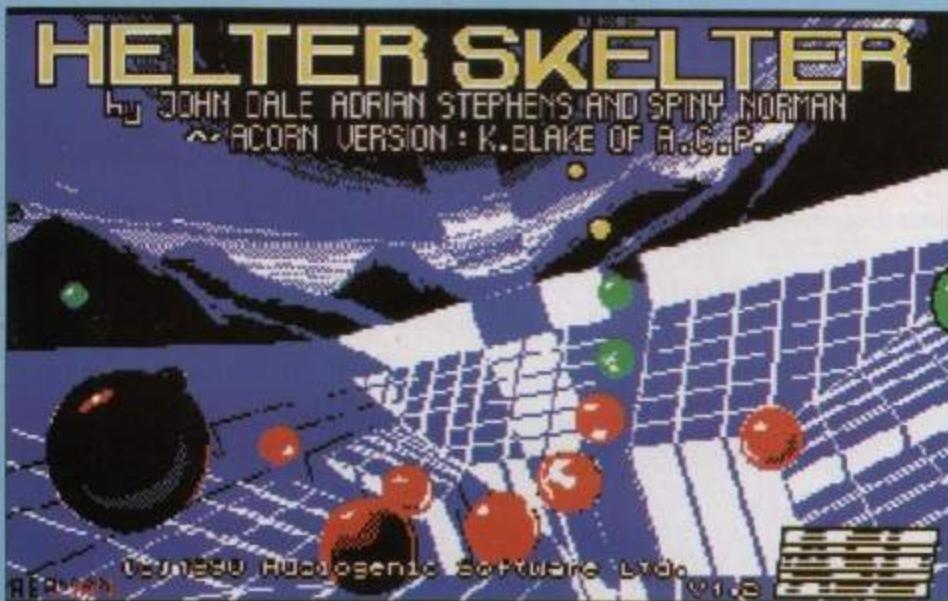
I would rate *Helter Skelter* as one of the better platform games to have hit the market in recent years. Simplicity is the keyword throughout: Simple controls, simple gameplay, simply fun!

Jon Revis

Sound	7
Graphics	8
Playability	9
Value for money	9
Overall	8

HELTER SKELTER

...bounce into action



FROM the very last issue of *Electron User* we travel back in time to the very first issue of this long-running magazine (the only Database Publications product that has lasted longer than *Electron User*'s six years and ten months is the evergreen *The Micro User*).

This month we'll take a look at how *Electron User* started and what was in issue number one, volume one.

The first October 1983 issue was never sold as a standalone magazine and was, as our older readers will remember, a pullout section of *The Micro User*. In fact, this was the only reason I bought the magazine, and I'm sure many other readers felt the same way.

The cover pictured the Electron and introduced four features that were to become very familiar to its new readership. And talking of readership, even by looking at the front cover it was easy to see that the magazine was clearly aimed at a very young audience indeed.

Casting Agency introduced a revolutionary and unique shape dictionary – an essential source of off-the-shelf user-defined characters ready to be incorporated into your own programs. These proved to be extremely popular, with reader submissions arriving by the sackful each month. Try this ballet dancer from Vol. 1 No. 1:

```
23,224,61,61,25,255,188,252,60
23,225,126,255,36,36,60,32,32,32
```

If you enter these two lines of code and then print character 224 on top of the 225 you should end up with a twirling ballet dancer!

Following a similar tack to *Casting Agency* was *Sounds Exciting* which aimed to build up a library of exciting sound effects. These snippets of Basic programs could then be included in your own masterpieces. From the October 1983 issue here is one of the first effects from *Sounds Exciting* called *Attack of the Mutant Flies*:

```
ENVELOPE 6,1,36,-36,0,20,20,0,126,
0,0,-126,126,126
SOUND 1,6,160,100
```

This first magazine also introduced an amusing cartoon character called *Micro Kid*. His antics kept readers smiling for quite a long time and was missed by many when he finally grew up and left for pastures new. At the foot of the page you'll find his first comic strip, in which he almost wears out

TIME WARP 1985

Journey back through the mists of time with Barry Woods' Tardis

his fingers typing in all the *Electron User* listings.

These listings were to form the backbone of the magazine, and in this particular little has changed over the years. Even now readers enjoy entering short game and utility program listings.

In fact, many of *Electron User*'s arcade games were marketed by budget software supplier Alternative and they stormed the Gallup charts, at one time occupying almost all of the top 20 positions.

The fourth regular feature introduced on the first front cover was *Software Surgery* – a cartoon drawing of a surgeon operating on a joystick headed the first software reviews page.

What was available during that first month of the Electron's existence? Not surprisingly, the four titles reviewed were all from Acornsoft and included *Starship Command*, *Monsters*, *Meteors*, and *Draughts and Reversi*. All were to become classics and are great fun to play even now, six years after their release.

Last, but by no means least, Mike Cook injected useful technical knowledge for DIY enthusiasts and hardware boffins with an exploration and documentation of the Electron's gold-plated double sided 50-way edge connector at the rear of the case.

And that just about wraps up this trip back through the mists of time. Now it's back to the computing future!



SUPERIOR SIX

RICOCHET



RICOCHET

A Massive Arcade Adventure with Brilliant Graphics. Over 330 different action-packed screens on 5 levels.

BBC Micro/Electron
Cassette £9.95

PLAY IT AGAIN SAM 11



PLAY IT AGAIN SAM 11

A Top-Hit Four-Game Compilation
Featuring: BARBARIAN, PIPELINE,
BARON and MONSTERS.

BBC Micro/Electron
Cassette £9.95

LAST NINJA 2



LAST NINJA 2

The Last Ninja is Back with a Vengeance. Battling with fists and weapons against the evil Shogun in downtown New York.

BBC Micro/Electron
Cassette £9.95

SUPERIOR SOCCER



BBC Micro/Electron
Cassette £9.95

SUPERIOR SOCCER

The Top BBC/Electron Soccer Game
Featuring both Arcade Soccer, with realistic graphics, and Soccer Management.

PLAY IT AGAIN SAM 12



PLAY IT AGAIN SAM 12

A Superb New Four-Game Compilation
Featuring: THE LAST NINJA, FAIR MEANS OR FOUL, SKIRMISH and BLAGGER.

BBC Micro/Electron
Cassette £9.95

PERPLEXITY



PERPLEXITY

Strategy Game with Impressive 3-Dimensional Graphics. A puzzling challenge for all Repton and Pacman fans.

BBC Micro/Electron
Cassette £9.95

The Chart Hits of 1990 - Don't Miss These Top Games !

BBC Micro Cassette.....£9.95 each

BBC Micro 5 1/4" Disc.....£11.95 each

Acorn Electron Cassette.....£9.95 each

BBC Master Compact 3 1/2" Disc....£14.95 each

Please write to the address below or telephone for a full list of Superior Software games.

**SUPERIOR
SOFTWARE**

ACORN SOFTWARE

(Superior Software is a trading name of Superior Microcomputing Ltd.)

Dept. CS3, P.O. Box 6, Brigg, S. Humberside DN20 9NH. Tel: (0652) 58585

PLEASE MAKE CHEQUES
PAYABLE TO "SUPERIOR SOFTWARE".

Available from
 WHSMITH
and all major dealers



24 HOUR TELEPHONE
ANSWERING SERVICE FOR ORDERS

OUR GUARANTEE

- All mail orders are despatched by first-class post.
- Postage and packing is free.
- Cassettes and discs that are faulty on receipt will be replaced immediately.

(This does not affect your statutory rights)

Darren Bradley moves a classic game from paper to the screen

GUNBOAT is a micro version of the popular pastime Battleships, the nautical game of skill and strategy for two players. Each is an admiral of fleets of warships, engaged in a battle of mammoth proportions.

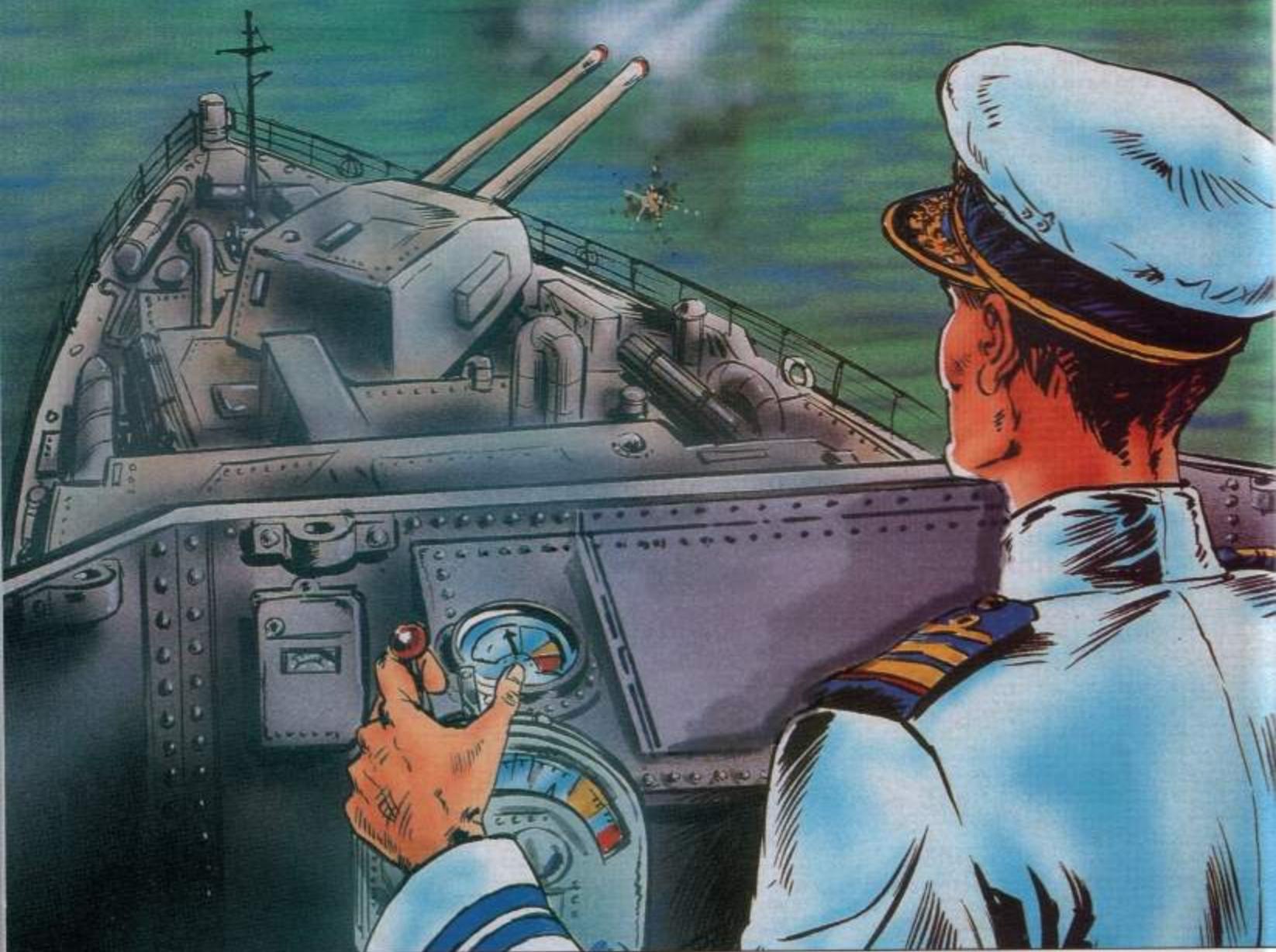
Each fleet consists of five ships, which vary in size and thus in the number of direct hits required to sink them. Once the micro has initialised the screen, player two will be asked to leave the room, while player one's fleet is established.

The ships are then erased from the screen and the process is repeated for player two. The battle now starts.

Shots are fired by entering the coordinates of the target square and pressing Return. Shots are alternated until one player is annihilated.

Full instructions – including the number of ships you have and their sizes – are contained in the program. So type it in and issue your orders.

Micro



Battleships

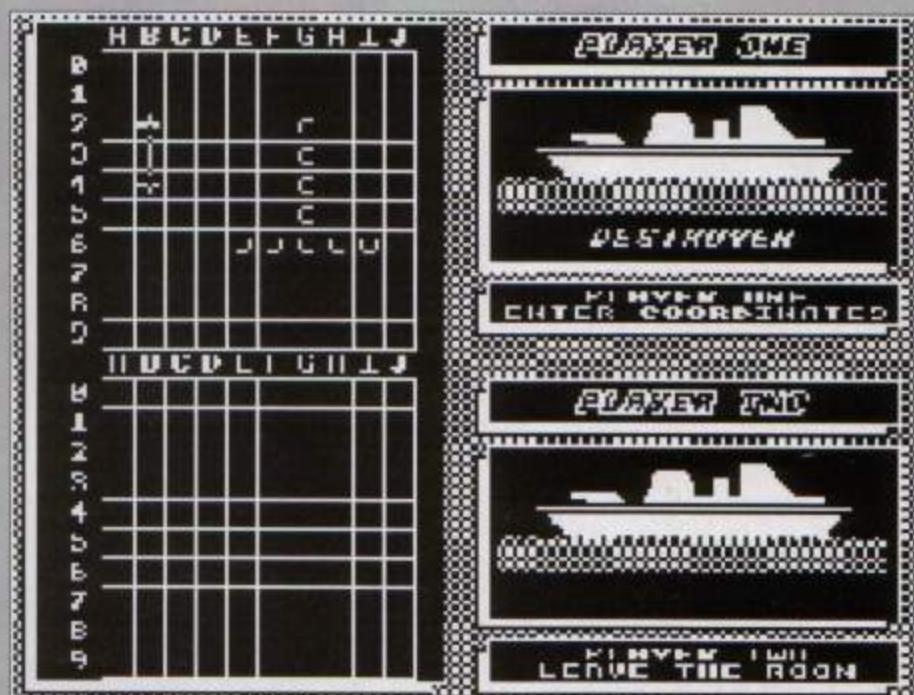
```

10 REM ****
20 REM *
30 REM *      GUNBOAT      *
40 REM *      BY DARREN BRADLEY *
50 REM *      (c) Electron User   *
60 REM *
70 REM ****
80 :
90 MODE4:ONERROR PROCerr
100 PROCst:PROCenter:REPEAT:PROCbatt
Le:UNTILM%:17 ORN%:17:PROCwin:VDU4:OSC
LI"FX15":RUN
110 :
120 DEFPROCerr:VDU22,6:SOUND1,-15,20
0,:PRINT"IFERR=17 REPORT:PRINT" at Li
ne ";ERL:END
130 PRINT"Hang on a minute ...":REP
ORT:PRINT" at line ";ERL:PRINT"And he
re's the offending line ...":OSCLI"FX1
5":OSCLI"KEYOLIST"+STRSERL+"|M":OSCLI"
FX138,0,128":END
140 :
150 DEFPROCst:o=$FFEE:p=&CF8:q=$70:r
=$71:s=$FFF:DIMQ1400,n$(4,1),p$(4),x(
16,2),y(16,2):FORn%:0TO2STEP2:PX:=QX:EO
PTn%:S:LDA#5:JSRo:LDA#0:STAq:T:LDXq:
LDA&110,X:CMP#13:BEQ:STAR:INX:STXq:LD
#r:LDY#0:LDA#8:JSRs:LDX#1:LDY#0:LDAr
,X:STAq,Y
160 INX:INY:LDAr,X:STAq,Y:INX:INX:IN
Y:LDAr,X:STAq,Y:INX:INY:LDAr,X:STAq,Y:
INX:INX:INY:LDAr,X:STAq,Y:INY:LDA#0:ST
Ap,Y:INY:LDA#0:STAq,Y:LDA#EFF:JSRo:JMP
T:U:LDA#4:JSRo:RTS:I:LDA#0:STAq:J:L
DXq:LDA&110,X:CMP#13:BEQ:STAR:INX:STX
q:LDX#r
170 LDY#0:LDA#8:JSRs:LDX#1:LDY#0:LDA
Ar,X:LSRA:STAq,Y:INX:INY:LDAr,X:LSRA:S
TAq,Y:INX:INY:LDAr,X:STAq,Y:INX:INY:LDA
Ar,X:STAq,Y:INX:INY:LDAr,X:STAq,Y:INX:
INY:LDAr,X:ASLA:STAq,Y:INX:INY:LDAr,X:
ASLA:STAq,Y:INX:INY:LDAr,X:ASLA:STAq,Y
:LDA#0:FF
180 JSRo:JMPJ:.K:RTS:3:NEXT:VDU23,82
02,0;0,0;19,0,4;0;19,1,3;0,:PROCbo:PRO
Cw1(32,912,1248,1008):PROCt("G U N B
O A T",432,992):PROCsm("BY DARREN BRAD
LEY",368,946):PROCt("I N S T R U C T
I O N S",272,864):VDU28,1,31,38,7
190 PRINT"Introduction: Gunboat
is a version of the classic two play
er game, ";:PROCt("BATTLESHIP."):PR
INT"! This simulation allows two play
ers to fight it out at sea, by attem
pting to find the opponent's hidden
ships."
200 PRINT"and ultimately, to sink th
eir fleet." Each fleet consists of
five ships: 1.) The Aircraft Carrier
2.) The Battleship 3.) The Destroyer
4.) The Submarine 5.) The Tug
Boat! The ships are of different s
izes."
210 PRINT"and thus require a varying
number of hits to sink.":PROCpscr:
PRINT"How to play: Each player mus

```

t in turn, set the coordinates of th
eir fleet, on the appropriate grid."
" While a player is setting up their
" 220 PRINT"fleet, their opponent must
leave the room or close their eyes,
so as not to see the location of th
e other player's ships." The keys
with which to set up the fleet are:
"Z .. Move Cross Left" "X .. Move C
ross Right"
" 230 PRINT" .. Move Cross Up" "? .. .
Move Cross Down" "<RETURN> .. Set Ship
" "<SPACE-BAR> .. Confirm Direction"
" <SHIFT> .. Unset Ship":PROCpscr:PRINT
" Once a player has positioned their
fleet, the coordinates are stored"
" 240 PRINT"and the ships are erased f
rom sight." The second stage of the
game is the battle. Each player, in
turn, inputs a pair of coordinates,
in the hope of hitting one of the
opponent's ships. The winner is the
250 PRINT"player who sinks their opp
onent's fleet first." The keys for
battle are: "<A-J> .. First Coordin
ate" "<0-9> .. Second Coordinate" "<DE
LETE> .. Alter both coordinates":PRO
Ct("GOOD LUCK !"):PROCpscr:VDU26,12:
RESTORE120
260 FORn%:0TO4:READn\$(n%,0),n\$(n%,1)
,p\$(n%):NEXT:M%:D:N%:D:ENVELOPE1,4,4,8
,128,4,8,128,126,0,0,-126,126,126:OSCL
I"FX9,1":OSCLI"FX10,1":VDU23,224,170,8
5,170,85,170,85,170,85,23,225,0,0,20,4
2,85,170,85,170,23,226,24,24,24,255,25

5,24,24,24
270
VDU23,227,0,60,66,66,66,66,60,0,
23,228,0,60,126,126,126,126,60,0,23,2
2
9,255,255,255,255,255,255,255,255,23,
2
30,16,16,56,120,244,228,66,2,23,231,8
8,28,30,47,39,66,64:SP\$=STRING\$(11,CH
R\$229):CO\$=">> : <<":FORn%:0TO4
280
PRINTSTRINGS(255,CHR\$224);:NEXT:
VDU5:MOVE1122,30:PRINTSTRINGS(6,CHR\$2
2
4):PROCbo:FORn%:0TO6:READa,b,c,d:PROC
W
i(a,b,c,d):NEXT:x=128:FORy=40TO48STE
P
44:MOVE128,y:DRAW568,y:MOVEx,40:DRAWx
480:MOVE128,y+484:DRAW568,y+484:MOVEx
524
290
DRAWx,964:x=x+44:NEXT:a=65:b=48:
y=956:FORx=136TO532STEP44:MOVEx,1000:
V
DUa:MOVE80,y:VDUb:MOVEx,516:VDUa:MOVE
8
0,y-484:VDUb:a=a+1:b=b+1:y=y-
44:NEXT:P
ROctx(p\$(0),800,988):PROctx(p\$(1),800



Player one positioning ships while player two is out of the room

B U S Y B E E T

BY GARETH DRAKE

I N T R O D U C T I O N S

Introduction:

Dunboat is a version of the classic two player game, *DDT7112*.

This simulation allows two players to fight it out at sea, by commanding their own fleet of ships to sink their foes.

Each fleet consists of five ships:

- 1-1 The Aircraft Carrier
- 2-2 The Battleship
- 3-3 The Destroyer
- 4-4 The Submarine
- 5-5 The Tug Boat

The ships are of different sizes, and thus require a varying number of hits to sink.

P R O G R A M M E R S

The instructions are comprehensive

```

460:PROCship(750,816):PROCship(750,28
8):ENDPROC
300:
310 DEFPROCbo:GC0L0,1:MOVE0,0:DRAW0,
1023:DRAW1279,1023:DRAW1279,0:DRAW0,0:
ENDPROC
320:
330 DEFPROCw(a,b,c,d):VDU18,0,129,1
8,0,24,a-16;b-16;c-16;d-16;16,26:MOV
Ea-16,b-16:DRAWc-16,b-16:DRAWc-16,d-16
:DRAWa-16,d-16:DRAWa-16,b-16:VDU18,0,1
28,18,0,1,24,a;b;c;d;16,26:MOVEa,b:DRA
Wc,b:DRAWc,d:DRAWa,d:DRAWa,b:ENDPROC
340:
350 DEFPROCtx(a$,x,y):VDU18,0,1,5:FO
Ry=y-4TOy+4STEP4:FORx=x-4TOx+4STEP4:
MOVEEx,yy:PROCit(a$):NEXT,:GC0L0,0:MOV
Ex,y:PROCit(a$):VDU18,0,1,4:ENDPROC
360:
370 DEFPROCsm($8110,x%,y%):MOVEEx%,y%
:CALLS:ENDPROC
380:
390 DEFPROCit($8110):CALLI:ENDPROC
400:
410 DEFPROCspscr:LOCALa$,b$,c$,a%:OS
CLI"FX21":a$=STRINGS(19," ")+"Press <S
PACE-BAR>":REPEAT:b$=INKEY$0:c$=RIGHT$(
a$):a$=c$+LEFT$(a$,35):PRINTTAB(1,2
3):a$:FORa%=$0TO100:NEXT:UNTILb$=" ":
UN0,-15,152,1:CLS:PROCbo:ENDPROC
420:
430 DEFPROCship(x,y):RESTORE1230:MOV
Ex,y:FORnX=$0TO41:READa,b,c:PL0Ta,b,c:N
EXT:GC0L0,0:FORn%=$0TO3:READa,b,c:PL0Ta
,b,c:NEXT:VDU18,4,0,5:MOVEEx-60,y-26:PR
INTSTRINGS(17,CHR$225):MOVEEx-60,y-58:P
RINTSTRINGS(17,CHR$224):VDU18,0,1,4:EN
DPROC
440:
450 DEFPROCenter:LOCALz:r%1:GC0L4,0
:REPEAT:PROCsm(p$(0),804,612):PROCsm(p
$(2),692,588):PROCsm(p$(1),804,84):PRO
Csm(p$(3),740,60):IFz=0 PROCset(1)
460 z=z+1:UNTILz=2:PROCerase(y3,r%):
z=0:r%2:REPEAT:PROCsm(p$(0),804,612):
PROCsm(p$(3),740,588):PROCsm(p$(1),804
,84):PROCsm(p$(2),692,60):IFz=0 PROCse
t(2)
470 z=z+1:UNTILz=2:PROCerase(y3,r%):
ENDPROC
480:
490 DEFPROCset(z):S%0:VDU5:FORn=$0
4:IFz=1 y=956:y1=y:y2=560:y3=704 ELSEy
=472:y1=y:y2=76:y3=176
500 d=0:x=136:MOVE963-((LENn$(n,0)*3
2)/2),y3:PROCit(n$(n,0)):MOVEEx,y:VDU22
6:REPEAT:IFINKEY-98 ANDx>136 PROCpr:x=
x-44:PROCpr ELSEIFINKEY-67 ANDx<532 PR
OCpr:x=x+44:PROCpr
510 IFINKEY-73 ANDy<y1 PROCpr:y=y+44
:PROCpr ELSEIFINKEY-105 ANDy>y2 PROCpr
:y=y-44:PROCpr
520 IFINKEY-74 SOUND1,-15,150,1:ox=x
:oy=y:d=FNst(ox,oy,y1,y2,n,z)
530 UNTILd:MOVE963-((LENn$(n,0)*32)/
2),y3:PROCit(n$(n,0)):NEXT:ENDPROC
540:
550 DEFPROCpr:MOVEEx,y:VDU226:ENDPROC
560:
570 DEFNNst(ox,oy,y1,y2,n,z):x1=ox-(
VALn$(n,1))-1)*44:x2=ox+((VALn$(n,1))
-1)*44:ya=oy-((VALn$(n,1))-1)*44:yb=oy
+((VALn$(n,1))-1)*44:PROCch:PROCpr2:=e
0:f=0:REPEAT
580 IFINKEY-98 ANDx>135 PROCpr2:x=x
1:y=oy:PROCpr2 ELSEIFINKEY-67 ANDx<53
3 PROCpr2:x=x2:y=oy:PROCpr2
590 IFINKEY-105 ANDya>y2-1 PROCpr2:y

```

```

=y:z=0:PROCpr2 ELSEIFINKEY-73 ANDy=0
y+1:PROCpr2:y=zb:z=0:PROCpr2
600 IFINKEY-99 SOUND1,-15,80,1:MOVEo
x,oy:VDU226:PROCpr2:f=FNdrsh(z):e=-1
610 IFINKEY-1 e=-1:f=0:PROCpr2:SOUND
1,-15,30,1:x=oy:y=oy
620 UNTILe=f
630:
640 DEFPROCch:IFx-((VALn$(n,1))-1)*
44>136 x=x1 ELSEx=x2
650 ENDPROC
660:
670 DEFPROCpr2:MOVEox+16,oy-16:DRAWx
+16,y-16:MOVEEx,y:VDU226:ENDPROC
680:
690 DEFNNdrsh(z):IFx<ox w=FNchl(x,ox
,z) ELSEIFox<x w=FNchl(ox,x,z) ELSEIFo
y<y w=FNchr(oy,y,z) ELSEIFy<oy w=FNchr
(y,oy,z)
700 IFw=0 x=136:y=y1:MOVEEx,y:VDU226:
=0 ELSE=-1
710:
720 DEFNNchl(d,d1,z):k=0:l=0:FORH=d
T0d1 STEP44:l=FNss(H,y,z):IFl k=-1
730 NEXT:IFk PROCillegal:=0 ELSEFORH
=d T0d1 STEP44:MOVEH,y:VDU227:ONz GOSU
8740,750:NEXT:=-1
740 x(S%,0)=H:x(S%,1)=y:S%=$x+1:RETU
RN
750 y(S%,0)=H:y(S%,1)=y:S%=$x+1:RETU
RN
760:
770 DEFNNchr(d,d1,z):k=0:l=0:FORH=d
T0d1 STEP44:l=FNss(x,H,z):IFl k=-1
780 NEXT:IFk PROCillegal:=0 ELSEFORH
=d T0d1 STEP44:MOVEH,y:VDU227:ONz GOSU
8790,800:NEXT:=-1
790 x(S%,0)=x:x(S%,1)=H:S%=$x+1:RETU
RN
800 y(S%,0)=x:y(S%,1)=H:S%=$x+1:RETU
RN
810:
820 DEFNNss(q,r,z):LOCALa%:b%0:FORa
z=$0TO16:ONz GOSUB830,840:NEXT:=b%
830 IFx(a%,0)=q ANDx(a%,1)=r b%=-1:R
ETURN ELSERETURN
840 IFy(a%,0)=q ANDy(a%,1)=r b%=-1:R
ETURN ELSERETURN
850:
860 DEFPROCillegal:MOVE963-((LENn$(n
,0)*32)/2),y3:PROCit(n$(n,0)):MOVE723,
y3:PROCit("ILLEGAL PLACING"):FORv=$0T01
4:SOUND1,-15,20,1:SOUND1,-15,8,1:NEXT:

```

```

:READb%,c%:PLOT1,b%,c%:NEXT:ENDPROC
1080 :
1090 DEFPROCpl2:hit%=-1:PROCsm(p$(0),
804,612):PROCsm(p$(4),724,588):PROCsm(
p$(1),804,84):PROCsm(p$(2),692,60):VDU
5
1100 GCOL0,1:MOVE787,176:PRINTCOS:MOV
E883,176:w=FNkey(956):IFw=0 MOVE787,17
6:GCOL0,0:PRINTSPS:GOTO1100
1110 FORn=224TO140STEP-4:SOUND1,-15,n
,1:NEXT:FORjX=0TO16:IFx(j%,0)=a% ANDx(
j%,1)=b% ANDx(j%,2)<>1 hit%=jX
1120 NEXT:IFhit%>-1 PROChit(826):x(hi
t%,2)=1:NX=N%+1 ELSEMOVEa%,b%:VDU227
1130 MOVE787,176:GCOL0,0:PRINTSPS:GCO
L4,0:PROCsm(p$(0),804,612):PROCsm(p$(4
),724,588):PROCsm(p$(1),804,84):PROCsm
(p$(2),692,60):ENDPROC
1140 :
1150 DEFPROCwin=LOCALa,b,c,d:CLS:PROC
bo:PROCship(416,480):MOVE4,454:VDU5:PR
INTSTRINGS(11,CHR$225):MOVE900,454:PRI
NTSTRINGS(12,CHR$225):MOVE4,422:PRINTS
TRINGS(11,CHR$224):MOVE900,422:PRINTST
RINGS(12,CHR$224):IFN%>17 d=1 ELSEIFN%
=17 d=0
1160 PROCx("HARD LUCK "+p$(d)+" !",2
88,864):PROCx("p$(ABS(d-1))+" HAS SUNK
YOUR FLEET.",144,800):VDU5:a=230:b=-2
4:c=20:REPEAT:FORn=0TO1:GCOL4,0:MOVE59
4+b,575:VDUa:FORK=0TO150:NEXT,,b=0:a=a
+1:c=c-1:IFa=232 a=230:b=-24
1170 UNTILc=0:VDU4,28,1,31,38,0:PROCps
scr:ENDPROC
1180 :
1190 DEFPROCsa:VDU12,17,129,17,0,31,6
,12,80,82,79,71,82,65,77,77,69,68,32,6
,6,89,32,68,65,82,82,69,78,32,66,82,65
,68,76,69,89,31,16,14,49,57,47,48,52,47
,57,48,13,10,17,1,17,128:ENDPROC

```

DEFENDER

BY DARRON BRADLEY

INSTRUCTIONS

How to play:

Each player must in turn set the coordinates of their fleet on the appropriate grid.

While one player is setting up their fleet, their opponent may move the cursor or close their eyes not to see the location of the other player's ships.

The keys with which to set up the fleet are:

X	:	Move Cross Left
*	:	Move Cross Right
*	:	Move Cross Up
*	:	Move Cross Down
SHIFT	:	Set Ship
SHIFT	:	Move Ship
Space	:	Print Direction

Press <SPACE-RAR>

Use keys to set up your dispositions

1200 :	0,0,0,0,-10,81,30,0,0,70,-10,0,20,0,81
1210 DATA AIRCRAFT CARRIER,5,PLAYER 0	,0,50,0,0,-50,0,0,10,81,230,-10,0,0,10
NE,BATTLESHIP,4,PLAYER TWO,DESTROYER,3	,81,-230,0
,ENTER COORDINATES,SUBMARINE,3,LEAVE T	1240 DATA0,50,0,0,-10,40,81,-40,-40,0
HE ROOM,TUG BOAT,2,FINGERS CROSSED	,0,40,81,40,0,0,40,-40,0,0,30,81,20,0,
1220 DATA32,32,608,1008,672,944,1248,	0,0,-30,81,-20,0,0,40,0,0,70,0,81,-70,
1008,672,656,1248,912,672,560,1248,624	50,0,30,0,81,40,-50,4,x-20,y,1,460,0,0
,672,416,1248,480,672,128,1248,384,672	,0,10,1,-460,0
,32,1248,96	1250 DATA-10,40,30,-10,20,40,20,-40,2
1230 DATA0,-40,81,350,0,0,30,40,81	0,50,30,-40,20,30,20,-10,30,15,20,-30,
,420,0,0,-10,0,0,0,10,81,440,0,0,0,-1	30,35,20,-20,40,25,10,-20,30,20,10,-30
0,81,-440,0,0,70,10,0,60,0,81,-20,20,0	,30,20,-20,-30,50,20,-20,-30,40,10,-30
,-30,0,81,-10,-20,0,10,0,0,10,81,-3	,-30,30,10,-20,-25

H B C D E F G H I J



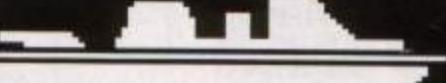
PLAYER ONE



>> H I <<

ENTER COORDINATES

PLAYER TWO



ENTER COORDINATES

**Use the form
below and
get up to
SEVEN*
issues
*FREE!***

There's lots in
The Micro User
of vital interest to
all Electron users
(see Page 33)

Now there's an even
better deal – take out a
subscription on the form
below and you'll be sent
up to **SEVEN*** monthly issues
completely free of charge!

*** worth £10.50**

Please register my subscription to *The Micro User* for

15 months (includes 7 free issues) for £18 31 months (includes 7 free issues) for £36

Payment: please indicate method (✓)

Cheque/Eurocheque made payable to Interactive Publications Ltd

Access/Mastercard/Eurocard/Barclaycard/Visa/Connect

Expiry
Date

Name _____ Signed _____

Address _____

Post Code _____

Daytime telephone number in case of queries _____

Post to: Database Direct, FREEPOST,
Ellesmere Port, South Wirral L65 3EB

(No stamp needed if posted in UK)

Order at any time of
the day or night

Don't forget to give your name,
address and credit card number

Orders by phone: 051-357 1275

Orders by fax: 051-357 2813

Orders by MicroLink: MAG001

General Enquiries: 051-357 2961

EU 6

Same game, different name

I RECENTLY bought the new Code Masters release Pro-Boxing Simulator. When I tried it I discovered that it is identical to By Fair Means or Foul from Superior Software.

Please could you explain this coincidence? — David Milliken, Renfrew, Scotland.

● You're right, Pro-Boxing Simulator is exactly the same as By Fair Means or Foul. A spokesman for Code Masters told *Electron User* that he apologised for the misunderstanding and the cassette inlays will be reprinted to clarify the matter for future customers.

Anyone who has bought Pro-Boxing who already has By Fair Means should send it to Code Masters with a covering letter. They will be given the choice of a new game from the current catalogue.

Listing hide and seek

COULD you please tell me where the listings for the speeding spiral in the May issue are?

● The two short listings you need are on page 28.

Phantom letter changes

I HAVE had an Electron for about four years and have been very pleased with its operation, and have regularly bought *Electron User*.

However I have run into a snag with the *Data Delver* September 1989 issue, taken from the accompanying tape.

When I run the program, instead of getting a menu I get:

No such variable
"5480BCS not_decompress"

This is just a message and copy of line

MICRO MESSAGES

5480 that is printed by the error trapping routine, but I have checked the program over — even though it has been taken from tape — but cannot see an obvious mistake.

Please can you advise me what's wrong?
— H. F. Knott, Wantage, Oxon.

● The magazine listing is correct, but somehow an *e* was changed to an *a* in line 5510 during the tape duplication process — Side 1 only. The correct line 5510 is:

5510 not decompress

There is, in fact, a backup of all the programs on the other side of the tape. Although this came from the same master disc, it is correct.

Electron/BBC Micro games compatibility

WE have recently bought a BBC Master to replace our broken down Electron and were told that our games could be converted to be used on it.

Unfortunately, since being told this, we have learned from someone else that it isn't possible to use them after all.

Can you please let me know whether Electron games can be used on a Master, and if so, how can it be done?

Thank you for *Electron User*: We have all found it very helpful on many occasions. — Pauline Wise, Harrow Weald, Middx.

● The only sure way to find out if a game will work is to try it. Some will work but oth-

ers will not.

However, when a game works, you may find it's too fast to play on the Master. Also, even if it seems to work well you may be missing some of the features of an actual Master version.

You'll find that some companies put the BBC Micro and Master version on the other side of the tape so you can just use that.

In a frenzy for a high score

IN December 1984 I bought myself an Electron and the first game I played on it was *Frenzy*.

Since then I have tried many other games, messed about with various programs and so on but always had the desire to beat the 600,000 author's score on *Frenzy*.

Today I did it at last. I scored 723,192 on my seventh attempt of the day. But what a let down: I expected at least a well done message from the game.

There was nothing: No trumpets or flags flying, just another score line. Talk about *Frenzy*.

But I do play other games. Here's my reader's point of view Top Twenty:

1	<i>Frenzy</i>
2	<i>Chuckie Egg</i>
3	<i>Danger UXB</i>
4	<i>Repton</i>
5	<i>Ravage</i>
6	<i>Condition Red</i>
7	<i>Plan B</i>
8	<i>Test Match</i>
9	<i>Quest</i>
10	<i>Palace of Magic</i>
11	<i>Elite</i>
12	<i>Gauntlet</i>
13	<i>Rig Attack</i>
14	<i>Stranded</i>
15	<i>Percy Penguin</i>
16	<i>Moonraider</i>
17	<i>Blockbuster</i>
18	<i>Astro Plumber</i>
19	<i>Strykers Run</i>
20	<i>Beach Head</i>

You just need a break

I HAVE reached the eighth screen of Superior's *Perplexity* and believe that it is impossible to complete unless one of the keys at the top right is facing left instead of right. Is there a fault or is it just me? — E. J. Byné, Sunbury on Thames, Middx.

● Steve Hanson, Superior Software, replies: There is nothing wrong with the keys, but some early copies of *Perplexity* were produced with a piece of wall on Screen 8 placed in the wrong position.

Once spotted, these copies were

destroyed, but unfortunately a few seem to have got into circulation. To recognise whether you have one of these rogue versions, check the top right of Screen 8.

The wall below the pair of keys at the top should have a break in it. If you have a faulty copy please return just the cassette — without the case or inlay — to Superior Software for a replacement. Please accept our apologies in advance.

If you have a faulty copy and wish to proceed, the password for Screen 9 is OSMIUM.

You'll note that *Frenzy* is still at the top of the list. I recommend this game for anyone. It's simple but addictive and must be one of the

most under exposed games ever. – G Davies, Irlam, Manchester.

● It's amazing how the reader's points of view vary. We can only see one similarity – the classic Elite – between this list and the one expressed by Simon Tarry in the June issue.

More modes for the screen dump

I HAVE just received my April monthly cassette and had a few problems loading Teton. However, I soon solved these but I still have a problem with Addend. When I loaded the game and entered the two names I got the message:

No such variable at line 550
Bad program

This mystified me as line 550 was exactly as in the magazine. Have you any idea why this is happening?

Thank you for the Screen Dump program – Micro Messages, August 1989. As printed, it works in Mode 2 so I have made the following changes for other modes:

Mode 5: Change line 360 to read:

MICRO MESSAGES

360 EQUB 0:EQUB 5*6:EQUB 6*6: EQ
UB 7*6

Mode 1: Change line 360 as above then change lines 240 and 280 to read:

240 LDX #3
280 CLC:LDA x:ADC #4:STA x:LDA x
+1:ADC #0:STA x+1 \x=x+4

Mode 4: Change lines 240 and 280 as above and line 360 to read:

360 EQUB 0:EQUB 7*6

I have been trying to convert the program to Mode 0 but without success. Please could any other reader help? – David McMullen, Clayton Bridge, Manchester (age 14)

● Thanks for your program modifications. Your problem with Teton must have been a clash between the program's machine code and a rom in your micro. The cure is to disable or remove roms if you have problems.

Addend needs PAGE set to &1900. Tape

users should load with the command:

PAGE=&1900:CHAIN"

Disc users who have Page at a different setting on their micro can either do the same or put an extra line in Addend:

0 IF PAGE <> &1900 THEN PA
GE=&1900:CHAIN"ADDEND"

Three ways to go wrong

I TYPED in the Commando Cheat exactly as printed in the May issue. But, when I run it I get the message Syntax error at line 220.

I looked back at the list and I have typed it as shown in the magazine. Why is it that I get the Error message? – Stuart Gentry, Beverley, N. Humberside.

● There are certainly no errors in the line:

220 [OPT1]

We can only assume you have not entered it as printed. We can see three places where you could have gone wrong:

◊ It is a square left-hand bracket – Shift with Copy – not either of the other shapes.

Try to spot the difference

I HAVE a basic Electron with no add-ons. Could you please list a simple memory editor? And what is the difference between a memory editor and disassembler, if any?

Also, could you please tell me what the significance of Lines 1710 and 1720 in the Patience listing of The June 1987 issue of Electron User is?

These lines, or others almost the same, appear in a number of listings. – A. Langley, Stevenage, Herts

● There was a memory editor in the May issue of Electron User. A memory editor just shows you what's in each byte of memory and allows you to change it byte by byte.

A disassembler takes the bytes and converts them into assembler language. To illustrate, here's the same section of memory looked at by each method:

```
0200 10 E3 02 B4 93 DC 89 DE .....  
0208 89 DF 72 E7 EB E7 A4 E0 ..P.....  
0210 C5 DE 1B FF 1E FF 21 FF .....!  
0218 24 FF 27 FF 2A FF 2D FF $!.*.-.  
0220 A6 FF A6 FF A6 FF A6 FF .....
```

A section of memory looked at with an editor

0200 10 E3 ..	BPL \$01E5
0202 02 ..	EQUB \$02
0203 B4 93 ..	LDY \$93,X
0205 DC ..	EQUB \$DC
0206 89 ..	EQUB \$89
0207 DE 89 DF ...	DEC \$DF89,X
020A 72 ..	EQUB \$72
020B E7 ..	EQUB \$E7
020C EB ..	EQUB \$EB
020D E7 ..	EQUB \$E7
020E A4 E0 ..	LDY \$E0
0210 C5 DE ..	CMP \$DE
0212 1B ..	EQUB \$1B
0213 FF ..	EQUB \$FF
0214 1E FF 21 ...!	ASL \$21FF,X
0217 FF ..	EQUB \$FF
0218 24 FF \$.	BIT \$FF
021A 27 ..	EQUB \$27
021B FF ..	EQUB \$FF
021C 2A ..	ROL A
021D FF ..	EQUB \$FF
021E 2D FF A6 ...-	AND \$A6FF
0221 FF ..	EQUB \$FF
0222 A6 FF ..	LDX \$FF

... and the same section viewed with a disassembler

Moving on to your other question, as your Electron is unexpanded the two lines you mention are not needed and will never be called. In Patience, they are called by line

40 if PAGE is higher than &E00 and move the program down in memory.

When a disc system – or other add-on like a rom cartridge – is added to your Electron it needs some memory. This is taken from &E00 upwards and your Basic program will then be higher – &1900 for DFS. This means that there is less room for the program to store variables and a long program may run out of memory. To prevent this happening, the disc interface is turned off – by the *T. in the line – and the program is moved over the disc workspace.

It's a good idea to put lines like this in your programs wherever possible so you can be sure they will work on tape or disc.

But remember that as the disc interface is then inactive you can't use disc, so the technique is no use if your program needs to save, say, a high score table to disc.

```
40 IF PAGE>&E00 GOT01700  
1700 REM Relocate  
1710 *KEY0 *T. |MD%=$PAGE-&E00:  
FORIX=$PAGE TO TOP STEP4:!(IX-D  
X)!=!X:NEXT:$PAGE=&E00|MOLD|MRU  
N|M  
1720 *FX138,0,128
```

The sections of listing from the June 1987 issue

- ◊ The word OPT begins with O, not zero.
- ◊ The variable I is a letter, not the number one.

Units that will not work together

I'VE owned and operated an Acorn Electron and Plus 1 for a couple of years and was fortunate to obtain a Plus 3. Unfortunately I have not been able to utilise all components together.

The Plus 3 does not operate with the Plus 1 attached and the response when the Welcome disc is inserted is Disc error 61 at 3/056C69 on channel 189.

Can you please advise me how these problems might be resolved to give me full use of the micro? I am hoping to utilise the View wordprocessor for business letters and mailouts but I am reluctant to buy a printer until these problems are rectified. — Tony Mahood, Wellington, New Zealand.

- The units are designed to work together so we can only suggest that one of them is faulty.

Tape troubles terminated

I WAS interested to read Mr. D. B. Johnson's letter in the March issue, referring to your response to my letter about tape loading problems in the January one.

When I wrote to you I had already tried all the checks mentioned in your reply to me, including changing the connect cable — which was brand new anyway. It made no difference.

The oddity about my Sony recorder lay in the fact that listening to a tape after I had attempted to record a program using it gave the usual noise. However, any attempt to load it into the micro was unsuccessful.

Paradoxically, the Sony would successfully load programs from commercial tapes or my own tapes saved on another recorder. I have simply dumped the Sony and bought the dedicated Acorn Data Recorder, which has eliminated all the problems I was encountering.

The Acorn Recorder was obtained — new and with a year's guarantee — from a mail order firm at a very low price. — S. H. Braithwaite, Lincoln.

- Sony recorders are usually good quality, so we can't understand why you had such problems. However, it could be that it is stereo rather than mono.

Mono recorders are best for use with the Electron, but a stereo one will usually work. You may have to experiment to find which channel to use or whether using both is best.

The Acorn unit is ideal for the job —

MICRO MESSAGES

recording data rather than music — but we find that excellent results can be obtained from most recorders.

Called to the bar

COULD you please help me with the cheat for Commando in the May issue of Electron User? I would like to know what the lines are on either side of the F and on either side of MRUN in line 130:

```
130 *KEY1 LOAD "Command 2" | F
M250 CALL&900|MRUN|M
```

I typed it in, missing the lines out, as I did not know what they were. I tried the command RUN, put in all of the cheats, heard the bleep and started the tape, but nothing happened.

Could you please tell me what these are? — Paul Davidson (Age 12), Jesmond, Newcastle-upon-Tyne

- The lines are the bar character, and you'll find it on the key to the left of Break — hold Shift as you press it.

When it is used in a "key" command it has the same effect as pressing Control with a key. So IM is the same as if you hold Control down and press M.

There are two of these control codes used in this line — IM and IF. The former is the same as Return: you can prove this by pressing Control+M instead of Return.

To explain IF you first need to look at line 140 of the program:

```
VDU7,21
```

This is really two VDUs together:

```
VDU7
VDU21
```

The first one just makes a beep each time you type it — as does pressing Control+G. The second is the one we are interested in: To use the User Guide's technical terms, VDU21 switches the VDU drivers off.

Put simply, it switches the display off. If you type the command and press Return, you'll find that nothing else will show on the screen until the drivers are switched on again.

To turn the screen on you need to press F while holding Control down — or put IF in a "key" command that is eventually called.

So let's briefly explain what is happening in the Commando cheat. Function key 1 is defined in line 130 then line 140 causes a beep, switches the display off and then the *fx138 command causes the same effect as

if the function key was pressed manually.

The commands in that line are then obeyed:

LOAD"COMMAND2" loads the program. The display is off from line 140 so you don't see anything happen.

IF switches the display on.

IM[T]Presses Return.

250 CALL&900IM is the same as typing a new line 250 and pressing Return, so it replaces the line 250 in COMMAND2.

RUNIM: Run Command 2 with the new line 250 which calls the code put in by the cheat at &900 — see line 210.

Interested in Art Studio

COULD you please review the Electron program, The Art Studio from Impact Software? This is probably the only art package available for an unexpanded Electron.

It is available for the Electron or BBC Micro on tape or disc for use either with keyboard or joysticks. I feel that a lot of people who read Electron User would be interested to know that a cheap and easy to use art package is available to them.

The review would also be a change from all games reviews. I hope that you will decide to review the Art Studio in a future issue. — Andrew Sage, Honiton, Devon.

- The Art Studio is one of the products that we'll be looking at in the first issue of *Let's Compute!* It will be packed full of information for users of all Acorn micros, including the Electron.

There are more details about it on page 24.

Cleaning up the contacts

IN the May issue of Electron User you published a letter from Tina Wall, saying that the down cursor key on her Electron had ceased to function. A similar thing happened to me a few months ago when the N on my machine suddenly became defunct.

I thought the problem might be that the contact under the key had become corroded, so I removed the screws and took the top off the machine to have a proper look under the key.

It appeared all right but I squirted a few drops of WD-40 under it to remove any corrosion that might be present. Then I pressed the key down a few times and it started to function again and has been all right ever since.

It could be that Tina has a more serious problem with her machine than mine proved to be, but it would be worth her while to try this remedy.

It must be very frustrating for her not to be able to use one of the cursor keys. — Joan Barnard, Buckhurst Hill, Essex.

HOLED OUT



EXTRA
COURSES
AVAILABLE

ARCADE SOCCER



The original two contrasting 18 hole courses. Comes complete with an easy to follow 16 page manual.

£10.95 SAVE £2

HOLED OUT EXTRA COURSES

Each of these two courses has been created to test your golfing abilities to the limits.

£7.95 SAVE £2

All three £24.95 SAVE £7.90

Get knitting with your micro with ...

Knitwear Designer

Now can use your Electron to design perfectly-fitting knitwear - then print out the complete pattern.

Say goodbye to badly-fitting home knitting. With one of the five programs included in the package, and using the clearly

£9.95
Cassette

Arcade Soccer really is football action at its very best

"The game is very playable and you do get a feeling of involvement as you knock the ball into the corner of the net straight past the diving goalie. It's definitely one to play again, and if you've enough friends it could make for a good day of enjoyment - and not a lot of games can do that. Value for money - 10 out of 10". *The Micro User, October '89.*

£7.95 SAVE £2

WHITE MAGIC 1

White Magic is a arcade adventure in which you control four varied adventures.

You can mix between all four characters at will and use their much needed special abilities.

It features 32 massive action-packed levels.

A fast-action game which requires fierce hand-to-hand combat and frantic weapon fire.

WHITE MAGIC 2

This includes 32 new and highly dangerous levels plus a complete level designer.

The level designer is easy to use. With it you can alter or design levels from scratch.

"The graphics are superb... An absolute winner" *Electron User Golden Game, August '89.*

**£7.95 each
SAVE £2**

New Educational Bundle

For a limited period we are offering All THREE Fun School 1 tapes PLUS Nursery Rhymes in a special educational bundle.

- Use your Electron to teach and amuse your children at the same time.
- Packages crammed full of educational programs - and so easy to use!
- Each program has been educationally approved after extensive testing in the classroom.

RRP £20.80

OUR PRICE

£9.95

NURSERY
RHymes

This delightful collection of programs is based around children's favourite Nursery Rhymes. There's plenty of sparkling colour, sound and captivating animation to keep them riveted - and as they play they'll be learning all the way.

FUN
SCHOOL!

Ages 2-5

Alphabet
Colours
Counting
House
Magic Garden
Matchmaker
Numbers
Pelican
Seaside
Snap

Balance
Castle
Derrick
Fred's Words
Hilo
Maths Test
Mouser
Number Signs
Seawall
Super Spell

Anagram
Codebreaker
Dog Duck Corn
Guessing
Hangman
Maths Hike
Nim
Odd Man Out
Pelmanism
Towers of Hanoi

Ages 5-8

Alphabet
Colours
Counting
House
Magic Garden
Matchmaker
Numbers
Pelican
Seaside
Snap

Balance
Castle
Derrick
Fred's Words
Hilo
Maths Test
Mouser
Number Signs
Seawall
Super Spell

Anagram
Codebreaker
Dog Duck Corn
Guessing
Hangman
Maths Hike
Nim
Odd Man Out
Pelmanism
Towers of Hanoi

Ages 8-12

Alphabet
Colours
Counting
House
Magic Garden
Matchmaker
Numbers
Pelican
Seaside
Snap

Balance
Castle
Derrick
Fred's Words
Hilo
Maths Test
Mouser
Number Signs
Seawall
Super Spell

Anagram
Codebreaker
Dog Duck Corn
Guessing
Hangman
Maths Hike
Nim
Odd Man Out
Pelmanism
Towers of Hanoi

5

fun-packed educational programs
... for young children everywhere

- ★ Tell the time with Hickory Dickory Dock.
- ★ Assemble the jigsaw in Humpty Dumpty
- ★ Learn to spell with Jack and Jill.
- ★ Match the animals in See Saw Marjory Daw.
- ★ Play an exciting game in Hey Diddle Diddle.

DUST COVERS

Keep your Electron free from dirt and dust with these smart dust covers. Made from rugged PVC, bound with strong cotton and sporting the distinctive *Electron User* logo, these are the perfect way to protect your micro.

ONLY £4.95

TO ORDER PLEASE USE THE FORM OPPOSITE

READER OFFERS

Back issues

(see page 40)

6 issues (January to June) £7.99 3180

6 Random Tapes Bundle £5.95 3164

Add £3 Europe & Eire / £12 Overseas

January 1990	£1.50	3246	<input type="checkbox"/>
February 1990	£1.50	3247	<input type="checkbox"/>
March 1990	£1.50	3248	<input type="checkbox"/>
April 1990	£1.50	3249	<input type="checkbox"/>
May 1990	£1.50	3250	<input type="checkbox"/>
June 1990	£1.50	3251	<input type="checkbox"/>

Zenon

£4.95 3143

Clogger

£4.95 3144

Adventure Anthology

£5.95 3044

Knitwear Designer

£9.95 3128

DTP Yearbook 1990

£14.95 3159

Arcade Game Creator

(see page 36)

Includes full documentation £9.95 3096

Educational Bundle

(see page 44)

ALL THREE Fun School 1

PLUS Nursery Rhymes £9.95 3064

The Fourth Dimension

(see page 44)

White Magic £7.95 3174

White Magic 2 £7.95 3175

Holed Out £10.95 3176

Holed Out Extra Courses 1 £7.95 3177

Holed Out Extra Courses 2 £7.95 3178

Bundle of 3 Holed Out Tapes £24.95 3179

NEW

Unless stated all software on this page is on tape.

Some of the products mentioned are also available on disc from P.R.E.S. through their advertisement in this issue.

Simply Superior

(see page 46)

Ricochet	£9.95	3166	<input type="checkbox"/>
Predator	£9.95	3167	<input type="checkbox"/>
Balletix	£9.95	3168	<input type="checkbox"/>
Superior Soccer	£9.95	3169	<input type="checkbox"/>

10 of the Best Education programs

(see page 4)

5.25" disc	£5.95	3063	<input type="checkbox"/>
3.5" disc	£6.95	3066	<input type="checkbox"/>

Add £1 for Europe/Overseas

Transparent Calculator

£7.95 3020

Dust Covers

(see page 44)

£4.95 3058

Books

(see page 6)

Electron Advanced User Guide	£3.45	3072	<input type="checkbox"/>
Electron Assembly Language	£2.95	3060	<input type="checkbox"/>
Getting Started in BBC Basic on the BBC Micro & Electron	£2.95	3100	<input type="checkbox"/>
All three books	£7.95	3061	<input type="checkbox"/>

Battery Charger

£19.95 3130

Plus post and packing £1.50

Keyword

3.5" ADFS disc	£14.95	3133	<input type="checkbox"/>
5.25" 80T DFS disc	£14.95	3132	<input type="checkbox"/>
5.25" 40T DFS disc	£9.95	3131	<input type="checkbox"/>



UNLESS OTHERWISE INDICATED:
For Europe & Eire add £3 towards postage
For Overseas add £5 towards postage

TOTAL

Send to:

Database Direct, FREEPOST,
Ellesmere Port, South Wirral L65 3EB

(No stamp needed if posted in UK)

Products are normally despatched within 48 hours of receipt
but delivery of certain items could take up to 28 days

Order at any time of
the day or night

Orders by phone: 051-357 1275

Orders by Fax: 051-357 2813

Orders by MicroLink: MAG001

General Enquiries: 051-357 2961

Payment: please indicate method (✓)

Cheque/Eurocheque made payable to Database Direct

Access/Mastercard/Eurocard/Barclaycard/Visa/Connect

Expiry Date /

No.

Name Signed

Address

Post Code

Daytime telephone number in case of queries EU7

FOUR SMASH HITS FROM SUPERIOR

SUPERIOR SOCCER

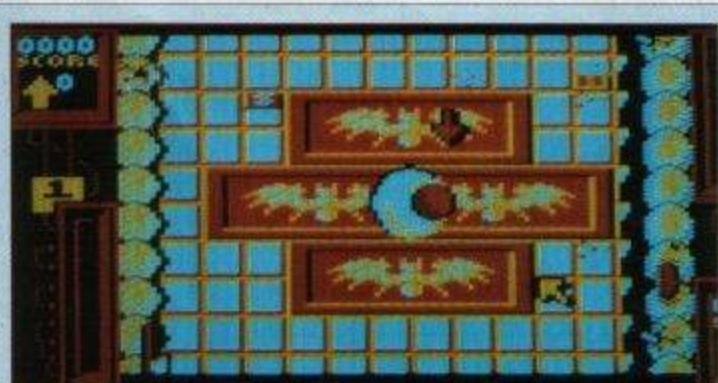
- Arcade Soccer and Football Management

You can choose to play either the action-packed arcade game or the challenging football management game. Or, for the ultimate in football excitement and realism, you can play the combined arcade and management game. So you can choose to be a player-manager!



SCHWARZENEGGER PREDATOR

You've heard about Predator, the Schwarzenegger film. Now you can play the leading role. Take a crack commando unit into South Africa jungle to rescue a bunch of trapped diplomats. Should be easy enough, so it would be if it weren't for the mysterious alien who keeps on taking out your men.



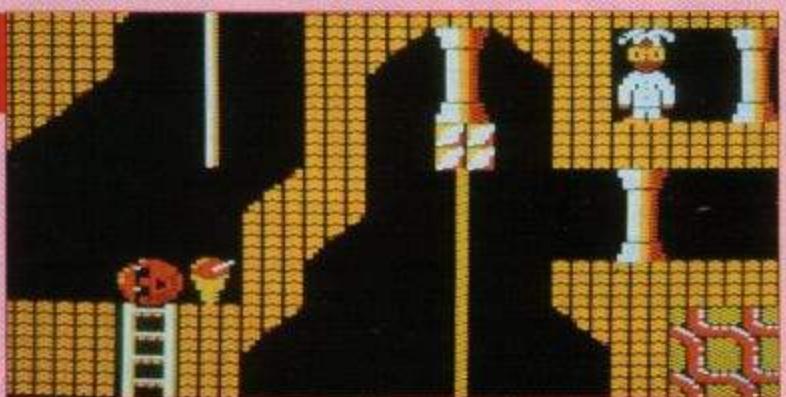
BALLISTIX

- It's a whole new ball game!

Sick of silly old soccer? Tired of pathetic pinball? Then you need a dose of BALLISTIX! It's the fastest, wackiest, toughest computer ball game yet – and a No.1 smash hit on the Atari ST and Commodore Amiga computers. Ballistix just explodes with excitement, puzzles and an amazing 60 different screens of frenetic action.

RICOCHET

You control Sprat – the small partially robotic alien time-traveller – in his quest to collect the five hour-glasses from the five worlds of Ricochet. Sprat can roll left and right, and can roll up and down ladders and ropes. But his unique ability is that he can jump to different heights and in different directions. You have to control this fast moving alien as he ricochets through the levels and solves the many clever puzzles.



To order please use the form on page 45

GRAB A BARGAIN!

Come and meet us in person at these terrific Micro Shows. See the NEW RELEASES and try them out for yourself.

ACOM User Show

Stand 72
Royal Horticultural Hall
London
7 - 9 September 1990

NEVRYON

This fast action from The Fourth Dimension is BBC disc based only and is made up of a massive 100K of superb graphics and game code.

It is a sideways scrolling shoot'em up which features 8 levels of furious opponents and very varied and very detailed graphics. You fly a spaceship which can attain immense firepower - more lasers, a ram, gun droid and highly destructive missiles which are released from the top and bottom of your ship, then ignite and shoot forwards.

A 100K game of non-stop action.

Disc prices below

FREE GAME HELP

Send over £4 on games and you may choose ONE of the following help/sheets/solutions and maps absolutely FREE!!

Send over £10 and you may choose ANY TWO FREE!!

HELP/SHEET For -
Evil 1, Evil 2, Dark, Elite, Paperboy, Spy vs Spy, Hoverbot, Frak, Impact Jokes 1, Impact Jokes 2, Scram, Anarchy Zone, Impact, Starquake

HELP/SHEET + MAP(S) For -
Pipeline, Kungfu, Dynamic, Invasion, Region 2

SOLUTION For -
Warrior, Computer, Esther 7, Tempest, The Hobbit, Kaylene, The Hunt

SOLUTION + MAP(S) For -
Special, Plan B, Arrest, Impover, Quest, Reversal, Golden Figure, Evil 3, Casket, Plan B2, Extr, Spellbound, Twin Kingdom, Valley, Omega One, Tarzan, Codename Droid, Thunderstrike 1 or 2, Last Ninja, Palace of Magic, Gobsmack Castle, Sphinx Adventure, Stormcycle, Lost Crystal

MAP(S) For -
Shark, Snakes Run, Thrust, Bonecrusher

APOCALYPSE

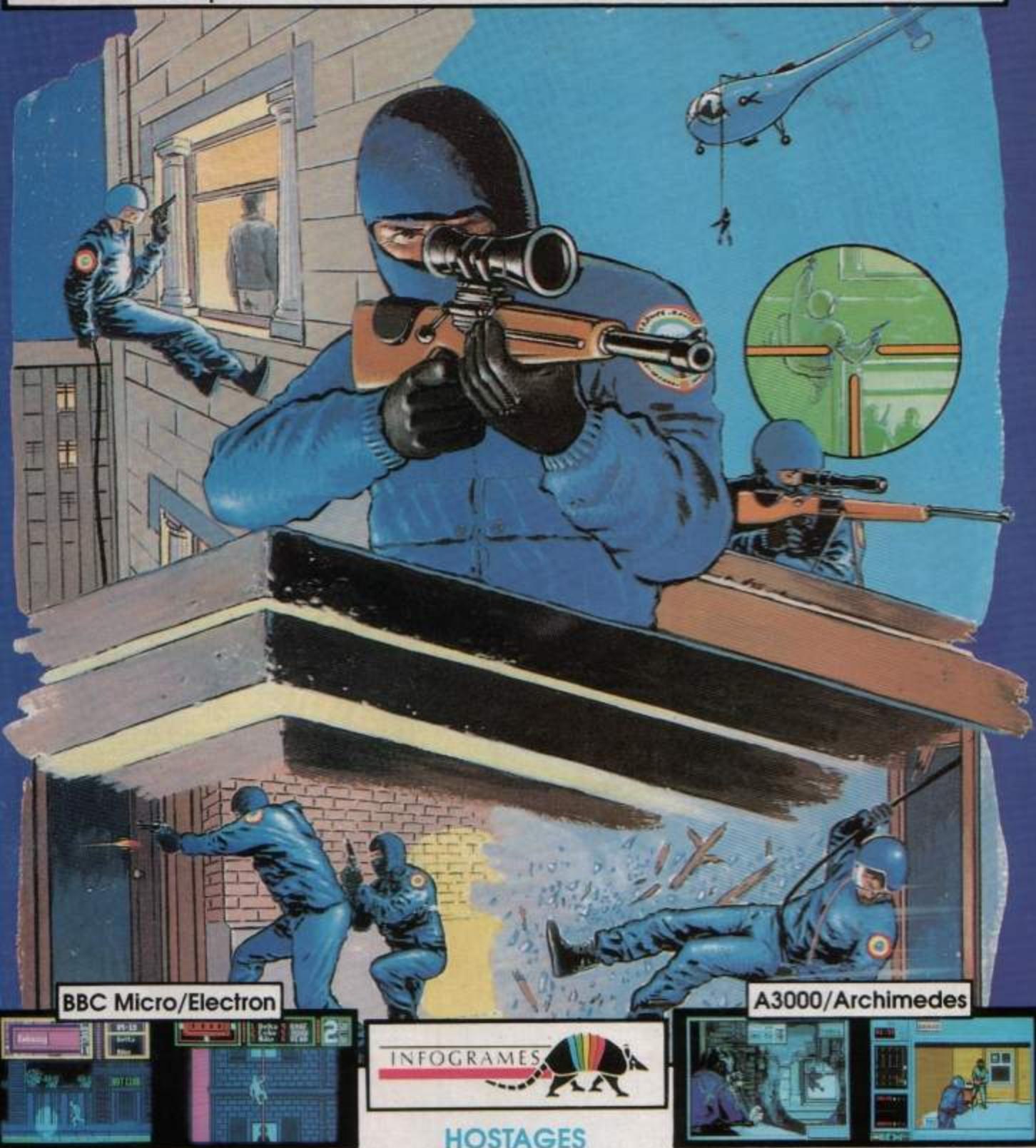
Produced by Gordon Key the author of Holed Out and E-Type, this incredible new Archimedes game sets new standards of excellence in 3-dimensional disc graphics and digitised sound effects. Your overall task is to rescue a whole solar system from an evil dictatorship. Apocalypse is a feast for your eyes, ears and grey matter.

Price Below

★★★★★ ARCHIMEDES/A3000 GAMES ★★★★★

Man - At - Arms (4th Dimension)	19.95	Corruption (Magnetic Scrolls)	29.95	Guild of Thieves (Magnetic Scrolls)	29.95	The Pawn (Magnetic Scrolls)	29.95
Apocalypse (The 4th Dimension)	29.95	White Magic (The 4th Dimension)	19.95	Quazer (Impact Software)	11.95	Rise in Crime (Robico)	25.95
U.I.M. (The 4th Dimension)	29.95	White Magic 2 (The 4th Dimension)	19.95	Interdancer (Clares)	29.95	All in Boxing (Alien Images)	12.95
Arcade Soccer (The 4th Dimension)	19.95	Fun School 2 (Under 6s)	16.95	Startrader (Gem)	16.95	Giant Killer (Topologika)	19.95
The Olympics (The 4th Dimension)	19.95	Fun School 2 (6 to 8 years)	16.95	Return to Doom (Topologika)	18.95	Freddy's Folly (Minerva)	12.95
Holed Out Designer (The 4th Dimension)	19.95	Casino (Minerva)	17.95	Avon & Murdoc (Topologika)	18.95	Alien (Dabs Press)	12.95
E-Type (The 4th Dimension)	19.95	Maddington Hall (Minerva)	12.95	Achition (Topologika)	18.95	Terramax (Grand Slam)	15.95
E-Type Designer (The 4th Dimension)	18.95	Talisman (Minerva)	12.95	Esther 7 (Robico)	25.95	Hoverbot (Minerva)	12.95
E-Type Extra: 100 Miles (4th Dimension)	18.95	Trivial Pursuit (Domark)	25.95	Word Up & Word Down (Gem)	16.95	Missile Control (Minerva)	12.95
Holed Out (3D Golf) (4th Dimension)	19.95	Fugitives Quest (Robico)	25.95	Jet Fighter (Minerva)	12.95	Minotaur (Minerva)	12.95
Holed Out Extra Courses Vol 1	16.95	Caverns (Minerva)	15.95	Fireball (Goda)	15.95	Ibix The Viking (Minerva)	16.95
Holed Out Extra Courses Vol 2	16.95	Family Favourites (Minerva)	16.95	Orion (Minerva)	12.95	Cheat It Again Archie (Impact)	11.95
Holed Out Extra Courses Vol 3	16.95						
Holed Out Extra Courses Vol 4	16.95						
Holed Out Extra Courses Vol 5	16.95						
Holed Out Extra Courses Vol 6	16.95						
Holed Out Extra Courses Vol 7	16.95						
Holed Out Extra Courses Vol 8	16.95						
Holed Out Extra Courses Vol 9	16.95						
Holed Out Extra Courses Vol 10	16.95						
Holed Out Extra Courses Vol 11	16.95						
Holed Out Extra Courses Vol 12	16.95						
Holed Out Extra Courses Vol 13	16.95						
Holed Out Extra Courses Vol 14	16.95						
Holed Out Extra Courses Vol 15	16.95						
Holed Out Extra Courses Vol 16	16.95						
Holed Out Extra Courses Vol 17	16.95						
Holed Out Extra Courses Vol 18	16.95						
Holed Out Extra Courses Vol 19	16.95						
Holed Out Extra Courses Vol 20	16.95						
Holed Out Extra Courses Vol 21	16.95						
Holed Out Extra Courses Vol 22	16.95						
Holed Out Extra Courses Vol 23	16.95						
Holed Out Extra Courses Vol 24	16.95						
Holed Out Extra Courses Vol 25	16.95						
Holed Out Extra Courses Vol 26	16.95						
Holed Out Extra Courses Vol 27	16.95						
Holed Out Extra Courses Vol 28	16.95						
Holed Out Extra Courses Vol 29	16.95						
Holed Out Extra Courses Vol 30	16.95						
Holed Out Extra Courses Vol 31	16.95						
Holed Out Extra Courses Vol 32	16.95						
Holed Out Extra Courses Vol 33	16.95						
Holed Out Extra Courses Vol 34	16.95						
Holed Out Extra Courses Vol 35	16.95						
Holed Out Extra Courses Vol 36	16.95						
Holed Out Extra Courses Vol 37	16.95						
Holed Out Extra Courses Vol 38	16.95						
Holed Out Extra Courses Vol 39	16.95						
Holed Out Extra Courses Vol 40	16.95						
Holed Out Extra Courses Vol 41	16.95						
Holed Out Extra Courses Vol 42	16.95						
Holed Out Extra Courses Vol 43	16.95						
Holed Out Extra Courses Vol 44	16.95						
Holed Out Extra Courses Vol 45	16.95						
Holed Out Extra Courses Vol 46	16.95						
Holed Out Extra Courses Vol 47	16.95						
Holed Out Extra Courses Vol 48	16.95						
Holed Out Extra Courses Vol 49	16.95						
Holed Out Extra Courses Vol 50	16.95						
Holed Out Extra Courses Vol 51	16.95						
Holed Out Extra Courses Vol 52	16.95						
Holed Out Extra Courses Vol 53	16.95						
Holed Out Extra Courses Vol 54	16.95						
Holed Out Extra Courses Vol 55	16.95						
Holed Out Extra Courses Vol 56	16.95						
Holed Out Extra Courses Vol 57	16.95						
Holed Out Extra Courses Vol 58	16.95						
Holed Out Extra Courses Vol 59	16.95						
Holed Out Extra Courses Vol 60	16.95						
Holed Out Extra Courses Vol 61	16.95						
Holed Out Extra Courses Vol 62	16.95						
Holed Out Extra Courses Vol 63	16.95						
Holed Out Extra Courses Vol 64	16.95						
Holed Out Extra Courses Vol 65	16.95						
Holed Out Extra Courses Vol 66	16.95						
Holed Out Extra Courses Vol 67	16.95						
Holed Out Extra Courses Vol 68	16.95						
Holed Out Extra Courses Vol 69	16.95						
Holed Out Extra Courses Vol 70	16.95						
Holed Out Extra Courses Vol 71	16.95						
Holed Out Extra Courses Vol 72	16.95						
Holed Out Extra Courses Vol 73	16.95						
Holed Out Extra Courses Vol 74	16.95						
Holed Out Extra Courses Vol 75	16.95						
Holed Out Extra Courses Vol 76	16.95						
Holed Out Extra Courses Vol 77	16.95						
Holed Out Extra Courses Vol 78	16.95						
Holed Out Extra Courses Vol 79	16.95						
Holed Out Extra Courses Vol 80	16.95						
Holed Out Extra Courses Vol 81	16.95						
Holed Out Extra Courses Vol 82	16.95						
Holed Out Extra Courses Vol 83	16.95						
Holed Out Extra Courses Vol 84	16.95						
Holed Out Extra Courses Vol 85	16.95						
Holed Out Extra Courses Vol 86	16.95						
Holed Out Extra Courses Vol 87	16.95						
Holed Out Extra Courses Vol 88	16.95						
Holed Out Extra Courses Vol 89	16.95						
Holed Out Extra Courses Vol 90	16.95						
Holed Out Extra Courses Vol 91	16.95						
Holed Out Extra Courses Vol 92	16.95						
Holed Out Extra Courses Vol 93	16.95						
Holed Out Extra Courses Vol 94	16.95						
Holed Out Extra Courses Vol 95	16.95						
Holed Out Extra Courses Vol 96	16.95						
Holed Out Extra Courses Vol 97	16.95						
Holed Out Extra Courses Vol 98	16.95						
Holed Out Extra Courses Vol 99	16.95						
Holed Out Extra Courses Vol 100	16.95						
Holed Out Extra Courses Vol 101	16.95						
Holed Out Extra Courses Vol 102	16.95						
Holed Out Extra Courses Vol 103	16.95						
Holed Out Extra Courses Vol 104	16.95						
Holed Out Extra Courses Vol 105	16.95						
Holed Out Extra Courses Vol 106	16.95						
Holed Out Extra Courses Vol 107	16.95						
Holed Out Extra Courses Vol 108	16.95						
Holed Out Extra Courses Vol 109	16.95						
Holed Out Extra Courses Vol 110	16.95						
Holed Out Extra Courses Vol 111	16.95						
Holed Out Extra Courses Vol 112	16.95						
Holed Out Extra Courses Vol 113	16.95						
Holed Out Extra Courses Vol 114	16.95						
Holed Out Extra Courses Vol 115	16.95						
Holed Out Extra Courses Vol 116	16.95						
Holed Out Extra Courses Vol 117	16.95						
Holed Out Extra Courses Vol 118	16.95						
Holed Out Extra Courses Vol 119	16.95						
Holed Out Extra Courses Vol 120	16.95						
Holed Out Extra Courses Vol 121	16.95						
Holed Out Extra Courses Vol 122	16.95						
Holed Out Extra Courses Vol 123	16.95						
Holed Out Extra Courses Vol 124	16.95						
Holed Out Extra Courses Vol 125	16.95						
Holed Out Extra Courses Vol 126	16.95						
Holed Out Extra Courses Vol 127	16.95						
Holed Out Extra Courses Vol 128	16.95						
Holed Out Extra Courses Vol 129	16.95						
Holed Out Extra Courses Vol 130	16.95						
Holed Out Extra Courses Vol 131	16.95						
Holed Out Extra Courses Vol 132	16.95						
Holed Out Extra Courses Vol 133	16.95						
Holed Out Extra Courses Vol 134	16.95						
Holed Out Extra Courses Vol 135	16.95						
Holed Out Extra Courses Vol 136	16.95						
Holed Out Extra Courses Vol 137	16.95						
Holed Out Extra Courses Vol 138	16.95						
Holed Out Extra Courses Vol 139	16.95						
Holed Out Extra Courses Vol 140	16.95						
Holed Out Extra Courses Vol 141	16.95						
Holed Out Extra Courses Vol 142	16.95						
Holed Out Extra Courses Vol 143	16.95						
Holed Out Extra Courses Vol 144	16.95						
Holed Out Extra Courses Vol 145	16.95						
Holed Out Extra Courses Vol 146	16.95						
Holed Out Extra Courses Vol 147	16.95						
Holed Out Extra Courses Vol 148	16.95						
Holed Out Extra Courses Vol 149	16.95						
Holed Out Extra Courses Vol 150	16.95						
Holed Out Extra Courses Vol 151	16.95						
Holed Out Extra Courses Vol 152	16.95						
Holed Out Extra Courses Vol 153	16.95						
Holed Out Extra Courses Vol 154	16.95						
Holed Out Extra Courses Vol 155	16.95						
Holed Out Extra Courses Vol 156	16.95						
Holed Out Extra Courses Vol 157	16.95						
Holed Out Extra Courses Vol 158	16.95						
Holed Out Extra Courses Vol 159	16.95						

HOSTAGES



BBC Micro/Electron

A3000/Archimedes



HOSTAGES



An urgent phone call from the National Security Minister....an Embassy has been overrun by terrorists. As Head of the Terrorist Combat Squad you are in control of all operations. First, you must place your crack marksmen in nearby buildings, avoiding infrared lights and the terrorists' deadly aim. Secondly, you must get your team of Specialist Paratroopers onto the Embassy roof.

Then, after descending by rope, and protected by your marksmen, enter the Embassy through the windows and begin your search in silence. But beware, each door, each room, could be a death trap! You must get the hostages, and your men, out of the buildings without any loss of life, and this will depend on the cohesion and co-ordination of your team. **NOW IT'S YOUR MOVE!**

BRILLIANT GRAPHICS AND GAMEPLAY....SUPERB SOUND EFFECTS AND TUNES....KEYBOARD OR JOYSTICK/.MOUSE CONTROL.

BBC Micro Cassette...£9.95

BBC Micro 5/1 Disc...£11.95

(Compatible with the BBC B, B+ and Master 128 computers.)

BBC Master Compact 3/1 Disc...£14.95

Electron Cassette...£9.95

A3000/Archimedes 3/1 Disc...£19.95

**SUPERIOR
SOFTWARE**

ACORN SOFTWARE

(Superior Software is a trading name of Superior Microcomputing Ltd.)

Dept. H 3, P.O. Box 6, Brigg, S. Humberside DN20 9NH. Tel: (0652) 58585

PLEASE MAKE CHEQUES
PAYABLE TO 'SUPERIOR SOFTWARE'.

Available from
WHSMITH
and all major dealers.



24 HOUR TELEPHONE
ANSWERING SERVICE FOR ORDERS

OUR GUARANTEE

- All mail orders are despatched by first-class post
- Postage and packing is free
- Cassettes and discs that are faulty on receipt will be replaced immediately

(This does not affect your statutory rights)